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CORRIGENDA ET ADDENDA.

Page 2, line 15 from bottom, for "*glaucomeria*" read *glaucomaria.*
— 6, — 8 from bottom, for "*Chroospora*" read *Chnoospora.*
— 9, — 12 from bottom, for "*Psiaclia*" read *Psiadia.*
— 11, — 19 from bottom, *for* "Hyprestes" *read* Hypoëstes.
— 11, — 10 from bottom, *for* "rodriguesii" *read* rodriguesiana.
— 282, — 4 from bottom. "Broussonnet" here and elsewhere throughout the paper is, according to the common usage of botanists, spelt with a double n; but that author himself, in the "Opuscules," Paris, 1785, spells his name with but a single n, *i. e.* Broussonet.
— 325, — 15 from top, for "*D. auriculata*" read *D. tenuisiliqua.*
— 325, — 9 from bottom, for "*Sinapis hispida*" read *Sinapis radicata.*
— 332, after line 15 from top *insert*:—*Ar. Geog.* Regio Mediterranea occidentalis. Proxime affinis *B. Columnæ,* Ten., in Oriente occurrit.
— 332, before line 18 from bottom *insert*:—*Ar. Geog.* Regio Mediterranea occidentalis.
— 352, line 3 from bottom, at end *insert*:—In hortis urbis Marocco
— 361, — 20 from bottom, *for* "quæ" *read* quam.
— 401, — 16 from top, *for* "florentem" *read* florens.
— 406, — 16 from top, *for* "Mogadorensis" *read* Boreali-Africana.
— 408, — 3 from bottom, for "*O. Schounii*" read *O. Schouwii.*
— 421, — 4 from top, *after* "raya!" *insert*:—Vidimus in horto Ben Dreis urbis Marocco!
— 488, — 19 from bottom, for "*Aparini*" read *Aparinæ.*
— 499, — 20 from top, *for* "ebracteolati" *read* bracteolati.
— 534, — 3 from top, *for* "phaiolepis" *read* phalolepis.
— 564, after line 20 from top *insert*:—*Ar. Geog.* Algeria interior. Marocco meridionalis.
— 585, line 21 from top, *for* "Reuta" *read* Reuter.
— 626, — 6 from bottom, *for* "insula" *read* insulam.
— 628, — 20 from top, *for* "nemini" *read* nullo.
— 630, — 18 from top, *for* "nemini" *read* nullo.
— 631, — 17 from bottom, transpose ", et" after "*T. Scorodoniæ.*"
— 633, — 15 from top, *for* "aut" *read* vel.
— 675, — 17 from bottom, *for* "variatates" *read* varietates.
— 694, — 17 from bottom, *for* "faice" *read* facie.
— 696, — 7 from top, *for* "nostra" *read* nostro.
— 702, — 8 from bottom, *for* "australi" *read* australis.
— 717, — 16 from top, *for* "Lim" *read* Limnetis.
— 719, — 3 from top, *for* "multis" *read* incultis.
— 720, — at bottom for "nex" *read* nec.
— 726, — 4 from bottom, *strike out* "cum" *before* "typica."

THE JOURNAL

OF

THE LINNEAN SOCIETY.

Note on the Uses of a commercial Cane termed "Whangee," a Species of *Phyllostachys*. By John R. Jackson, A.L.S.

[Read December 21, 1876.]

Under the name of "Whangee," a jointed bamboo is imported in considerable quantities into this country, it is said from China, for the manufacture of walking-canes. For a long time the scientific name of the plant producing these canes was quite unknown; latterly, however, they have been attributed to the genus *Phyllostachys*, *P. nigra* being the species chiefly accredited with their production; on this point, however, there is still some doubt. From whatever species of bamboo they may be produced, one thing seems clear, that the "Whangee" canes, as seen in trade, are not the stems proper, as is generally supposed, but the underground stems, the small circular markings surrounding each joint being the scars whence the roots have been given off, and the indentations on the alternate sides the points from which the aerial stems have arisen. The above-ground stems assume a different character, being, of course, minus the root-scars, which is a distinguishing mark and a point of beauty in the commercial cane. Thus two distinct canes seem to be produced by the same plant, one from the underground, and the other from the above-ground stem. The specimen (exhibited at the Meeting), which is from a plant grown at Chatsworth, seems to me sufficiently to illustrate this. One thing is remarkable, that all the imported "Whangee" canes are white, while the English-grown specimen is black. This I can account for only by supposing the former to be systematically bleached at the same time that they are straightened before exportation. The length required for a walking-stick is perhaps unusual for the rhizome of a bamboo; but this may be attained by keeping the stem buried beneath the soil until it has grown to a sufficient length. That this may be done as a system is possible, when we know that in Algeria the young sticks of the Medlar are gashed transversely, while they are growing, to give them a knotted appearance, and so enhance their value in the market.

New British Lichens. By the Rev. W. A. Leighton, B.A., F.L.S.

[Read December 7, 1876.]

(Abstract.)

In this communication the author describes in detail, and gives coloured drawings from nature, of the following eleven examples of Lichens new to Britain, of which the diagnosis &c. will appear in due course in the Society's 'Transactions.'

- *Lecidea impressula*, n. sp.
- *L. tephrizans*, n. sp.
- *L. ryssolea*, n. sp.
- *L. imponens*, n. sp.
- *L. glaucomeria*, n. sp.
- *L. parellaria.*
- *L. endomelæna*, n. sp.
- *Odontotrema majus*, n. sp.
- *Verrucaria neottizans*, n. sp.
- *V. fumosaria*, n. sp.
- *V. pertenuis*, n. sp.

On the Root-stock of *Marattia fraxinea*, Sm. By John Buchanan, F.L.S., of the Geological Survey of New Zealand.

[Read February 15, 1877.]

(Plate I.)

Marattia fraxinea, as now determined in the 'Species Filicum' of Hooker and Baker, has a very extensive range, being noted as found in South Africa, East Indies, Australia, and in several islands of the Pacific ocean. In New Zealand it is found only in the northern part of the North Island. In the eastern portion of this district it is very rare, being probably confined to two localities of limited areas at the Bay of Islands and Whangarei Bay.

The rootstock of this fern is used by the Maories as an article of food; but they have never cultivated it in a systematic manner; they say that if a rootstock is smashed into numerous pieces and thrown on the ground, every piece will form a new plant: in this way they may have occasionally increased the number by scattering portions about in places suited to its growth. It is evident, however, that whether they used any means or not to increase the plant, it is always rare wherever they themselves are numerous; and it is only in a few localities in the western part of the district, where there are few native settlements, that it is abundant.

When transplanted to the southern parts of the North Island, as at Wellington, this fern grows freely in rich damp soil on the banks of creeks under the shade of trees.

At the commencement of the present year the Hon. W. B. D. Mantell received from Taranaki a sackful of what was called pieces of the rootstock of the Uwipara (*Marattia fraxinea*); they appeared, from their uniformity in shape and covering of black cuticular bark, to be more like distinct individual bodies than broken pieces from a large mass. A number of these bodies were planted out in the Botanical Garden, Wellington, and a number in Mr. Mantell's garden; and I was induced to watch the progress and method of their growth, and also to examine the structure of the mature rootstock of the full-grown plant. The following notes are therefore the result of observations made on the New-Zealand species of this genus (*M. fraxinea*, Sm.), as to its method of reproduction by the root, which may add to the present knowledge on this subject.

The rootstock or rhizome of *Marattia* is described by Hooker in the 'Flora of New Zealand' as "a large, rounded, hard, fleshy mass as large as the head," and in the 'Handbook of the New-Zealand Flora' as "a large tuberous rhizome." Again, De Vriese and Harting, in their illustrated monograph of ferns, published at Leyden in 1853, describe it as "a succulent, tuberous, irregularly shaped mass, upon which the stems are articulated."

As no additional information is given in the more recent accessible work on ferns, 'Species Filicum,' of Hooker and Baker, I now add the following.

The rhizome or rootstock of the New-Zealand species is composed of an irregular agglomerated mass of thick fleshy scales, each scale being formed by the enlargement of a stipe-base, the stipe separating by an articulation above the swelling after the frond has performed its functions. The articulated surface of the scale shows a scar-mark much resembling the imprint of a horse-hoof. It is probable that the mobility of the stipe mentioned by Colenso takes place immediately before separation, after decay at the articulation has commenced; but I have not observed this.

Such a rootstock approaches the scaly bulb more in structure than a fern-rhizome, but without a central mass round which the scales might be arranged in order.

The continued addition of new scales outwards and upwards often raises the rhizome above the surface of the ground; but the frond-buds of those scales only which are in contact with the soil throw out independent roots. This form of rootstock may therefore be named a scaly subaerial rhizome without internodes.

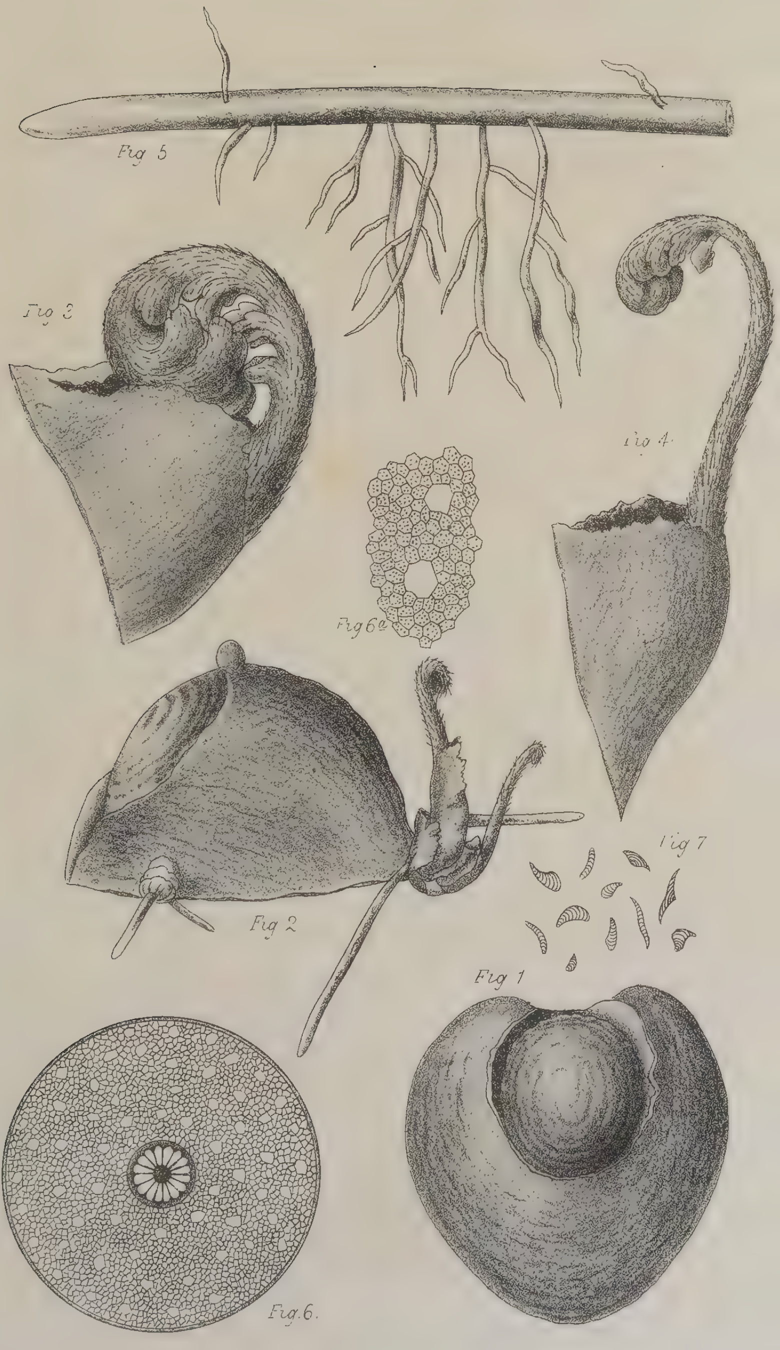
The procedure in propagating *Marattia* by scales is very similar to that of the common potato. When the plant is grown from a detached scale, the buds may sprout from any part of its surface, differing in this respect from the potato in having neither points nor eyes; and when a frond-bud springs from the crown of the rhizome or from a scale above the surface of the ground, it derives its nourishment through the parent scales. The bud swells to a considerable size before the crozier bursts through the cuticular bark; during this process the latter is split and the edges carried upwards, forming the so-called adnate stipules of authors, and remains as a sharp ridge round the scar where the stipe articulated. The new stipe begins to swell at its base at a very early period, spreading over the adjacent surface and forming a new scale.

The growth of the *Marattia* rhizome is remarkably slow, being, under favourable circumstances, only one inch diameter in one year; and as the height is less than the diameter, it may be safely calculated that a Maori will consume in one day the growth of five years, which fact may account for this fern becoming rare in certain localities. The rhizome, by a process of renewal and movement, lives for an indefinite time, shifting its position in the ground by its growth outwards from a centre, the exhausted scales accumulating in a hard mass on the original site. In this way, as in certain fungi, rings or detached clumps may be formed at equal distances from the centre if no obstruction exists.

Before the exhaustion of any part of the rhizome mass, adventitious frond-buds may sprout from any part of its surface either above or below ground.

J Buchanan.

LINN. SOC. JOURN. BOT. VOL. XVI Pl.



D. Blair lith.

M&N Hanhart imp

MARATTIA FRAXINEA.

I am also of opinion, although requiring longer observation to prove it satisfactorily, that the rhizomes of the New-Zealand *Botrychium* and *Ophioglossum* are built up, or added to, on a similar method to that of *Marattia.*

Note.—Since writing the above, I have been shown by Dr. Hector an old Maori vocabulary by the Rev. Richard Taylor, called 'A Leaf from the Natural History of New Zealand' (1848), where the author, under the name *Owipara*, gives the following:—" *edible fern, the root, which separates into* scales, *is eaten,*" showing that this peculiar structure had been noticed by Mr. Taylor twenty-eight years ago.

DESCRIPTION OF PLATE I.

Fig. 1. Front view of a scale, about one fourth natural size. It is composed of cellular tissue filled with starch-grains, fibro-vascular bundles, and covered by an adhering bark. The cut section shows numerous small orange-coloured spots, which exude on the surface, when newly cut, a viscid gum-resinous matter.

2. A scale after three months in the ground, showing the method of bud-growth with roots proceeding from the bottom of the bud. Rather under one fourth nat. size.

3, 4 are two illustrations of the frond-growth above ground, showing the croziers in two stages of development and the formation of the adnate stipule. Reduced to about one fourth nat. size.

5. Root-process, showing rootlets proceeding chiefly from the lower side of root; the whole very flexible. About one fourth nat. size.

6, 6 *a*. Sections of root enlarged; the chief component mass is cellular tissue and starch-grains with lacunæ; there are also star-shaped nuclei of fibro-vascular and scalariform bundles, the bundles distinctly wedge-shaped, the root thus showing a stronger affinity in structure to the Equisetaceæ than to Ferns, and presenting an additional reason to the difference in Sporangia why Marattiaceæ should be separated from Ferns.

7. Starch-grains of *Marattia fraxinea,* Sm.

Note on Algæ collected by Dr. I. B. Balfour* at the Island of Rodriguez. By GEORGE DICKIE, M.D., F.L.S.

[Read February 15, 1877.]

THIS small collection of Algæ was made during the stay of the Transit-of-Venus Expedition in the island of Rodriguez in 1874. The short time devoted to the collection of marine forms accounts for its smallness. Of the 52 species and varieties herein enumerated, 39 are marine, a number so small that it manifestly cannot be considered a fair representation of the marine alga flora. None of them calls for special mention, as all are widely spread in the Indian Ocean and tropical seas. The remaining 13 are freshwater forms. 6 of these have a general range throughout Europe, some being quite cosmopolitan. The rest are more restricted in distribution: 2 species, *Thorea violacea*, Bory, and *Cladophora hamosa*, Dickie, are peculiarly Mascarene; *Chantransia cærulescens*, Mont., is, strange to say, a Cayenne species; whilst *Conferva Ansonii*, Ag., and *C. moluccana*, Ag., are each confined to a single island in the Eastern archipelago; and there is an Indian species (*Cladophora Rœttleri*, Ktz.).

In addition to those enumerated in the list, fragments of others (such as *Vaucheria*, *Odontidium*, &c.) occur, but in too imperfect a condition for determination.

A survey of the freshwater algæ of Rodriguez shows us affinities with forms from all parts of the world; and while certain of the species are universally distributed, others are limited in their range; and of these I may note that none are African species, but they point mainly in an eastern and Asiatic direction.

List of Genera and Species.

Sargassum vulgare, Ag.
—— *ilicifolium*, Turner.
Turbinaria ornata, Turner.
Chroospora implexa, Hering.
Dictyota dichotoma, Huds.
Padina Pavonia, L.
Zonaria nigrescens, Sonder.
Asperococcus sinuosus, Roth.
Hydroclathrus cancellatus, Bory.
Mesogloia virescens, Carm.
Sphacelaria rigida, Hering.
Digenea simplex, Wulf.
Laurencia papillosa, Forsk.
—— *obtusa*, Hudson.
—— *flagellifera*, J. Ag.

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* A fuller notice of this collection of Algæ will be published in the Roy. Soc. Gen. Report on the Venus-trans. Exped., which, however, may be less easy of access to cryptogamic botanists; hence the present excerpt.

Amphiroa fragilissima, L., var. *linearis*.
Lithothamnion mamillare, Harv.
Gracilaria corticata, J. Ag.
Hypnea hamulosa, Turner.
—— *Valentiæ*, Wulf.
Gelidium rigidum, Vahl.
Liagora viscida, Forsk.
Chylocladia rigens, Ag.
Caulerpa ericifolia, Ag.
—— *Boryana*, J. Ag.
—— *plumaris*, Vahl.
—— *mamillosa*, Mont.
Halimeda opuntia, Lamx.
—— *tuna*, Lamx.
Codium tomentosum, Stackh.
—— *adhærens*, Ag.
Valonia ægagropila, Ag.
Microdictyon Agardhianum, Dne.
Dictyosphæria favulosa, Dne.
Ulva latissima, L.
Enteromorpha intestinalis, Link.
—— *compressa*, Grev.
—— *ramulosa*, E. B.
Batrachospermum moniliforme, Ag., var. *æquinoctiale*.
Thorea violacea, Bory.
Conferva moluccana, Ag.
—— *bombycina*, Ag., var. *inæqualis*, Ktz.
—— *Ansonii*, Ag.
Cladophora Roettleri, Ktz.
—— *pannosa*, Dickie.
Chantransia cærulescens, Mont.
Œdogonium fonticola, A. Braun?
Rhynchonema angulare, Hass.
Staurospermum capucinum, Bory?
Lyngbya majuscula, Dillw.
Leptothrix lutea, Ktz.
Nostoc commune, Vauch.

Aspects of the Phænogamic Vegetation of Rodriguez, with Descriptions of new Plants from the Island. By I. Bayley Balfour, D.Sc., F.L.S.

[Read February 1, 1877.]

(Abstract[*].)

As regards the history of its flora, the island of Rodriguez bears a striking resemblance to St. Helena. We read of the latter island that fire, goats, and finally introduced foreign plants well nigh exterminated the indigenous flora; and the same causes have operated and, I regret to say, are still operating in Rodriguez. The result is that the primitive vegetation has been in great part destroyed, leaving the island a field for the rank and rapid growth of common tropical weeds. The old and luxuriant vegetation of two hundred years ago—thus quaintly described by Leguat*, "We could hardly take our eyes off from the little mountains of which the island entirely consists; they are so richly spread with great and tall trees," and, again, "'Tis as I have hinted, composed of lovely hills covered all with fine trees whose perpetual verdure is entirely charming"—has now, to a large extent, disappeared, and is represented by only a few species, many of which are confined to the more unfrequented and less accessible places. It is indeed difficult to recognize in the barren and arid Rodriguez of the present day the "little Eden," "lovely isle," "earthly paradise" of Leguat.

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[*] A full and descriptive account of the botany of Rodriguez, amply illustrated, will hereafter be published by the Royal Society in their general Report of the Venus-transit Expedition to that island. But as a wish has been expressed by several botanists that I should give a *résumé* of some of the novelties among the flowering plants without further delay, I herewith, by permission, lay an abstract of a few of the more important points before the Linnean Society.

The flora, as it now exists, is an exceedingly fragmentary one; it is therefore a matter of some difficulty to determine its exact limits and to draw conclusions as to its affinities with the floras of other oceanic islands and of adjacent continents. This is the more to be regretted, as, from the geographical position of the island and the physical condition of climate to which it is subject, its flora might be expected, whether taken singly or as part of that of the Mascarene group, to contribute very important data towards the solution of the problem of the distribution of plant-life in that region. The following general statements may, however, be made:—

1. The flora is essentially insular.
2. The facies is tropical.
3. It is that of a dry rather than of a humid climate.
4. It is characteristically Mascarene, but possesses a fair amount of individuality.
5. It presents affinities with the floras of many other regions, most markedly with the African; but there are also some curious Polynesian and American relations, and strong Asiatic or eastern connexions.

The flora, as I found it, is composed of 470 species: of these, 297 are Phanerogams; the remainder (173) are Cryptogams. Of the 297 species of Phanerogams now growing on the island, considerably over one third have been introduced, and many of the remainder are widely spread weeds in the tropics of both hemispheres. In this number I include many plants which have escaped from, or are relics of, former cultivation, and ought perhaps to be expunged from the list; but I record their presence, as it is possible that, in time, many of them may occupy a more prominent position in the flora.

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* 'A New Voyage to the East Indies,' English translation. London, 1708.

The prevailing natural orders of the flowering plants are Leguminosæ, Convolvulaceæ, Solanaceæ, Malvaceæ, Compositæ, Euphorbiaceæ, Rubiaceæ, Cyperaceæ, Myrtaceæ, Liliaceæ, and Rutaceæ. All but the last three are, it will be observed, orders which, as a rule, compose a great part of the flora of any tropical islands reached by civilization. There are 35 endemic species of Phænogams, and 34 species which occur nowhere out of the Mascarene islands. The 35 peculiar species belong to 30 genera, and are included in 21 natural orders. Monocotyledons constitute six of these species, or about one sixth of the whole. Of the endemic species hitherto undescribed diagnoses are now given. Of the natural orders in which peculiar species occur, Rubiaceæ, which constitutes one thirtieth of the whole flora, is most largely represented in them, including 5 species belonging to as many genera. Altogether ten Rubiaceous plants are found in Rodriguez. Two of these are introduced—*Coffea arabica*, a relic of cultivation, and the common *Vangueria edulis*; and of the remaining 8, 3 (*Oldenlandia Sieberi*, *Fernelia buxifolia*, and *Antirrhœa frangulacea*) are Mascarene only; whilst 5 are peculiar, though 3 of them have representatives in other Mascarene islands.

Of 11 Compositæ, 3 species belonging to two genera are endemic, 2 belonging to *Psiaclia*, and the third is a species of the curious genus *Abrotanella*; and a fourth, a species of *Senecio*, is Mascarene.

Other Dicotyledonous orders containing peculiar plants are:—Myrtaceæ, including a peculiar *Eugenia*; Euphorbiaceæ, embracing a new *Euphorbia* and a *Phyllanthus* found by Commerson; Piperaceæ, represented by 3 new species of *Peperomia*; Rutaceæ, of which a *Zanthoxylon* occurs; Meliaceæ possessing a characteristic species of the Mascarene genus *Quivisia*; Turneraceæ, having a peculiar genus with Central-American affinities; Verbenaceæ, of which the Polynesian hitherto monotypic *Nesogenes* is represented by a new species, and there is also a *Clerodendron*; Asclcpiadaceæ, comprising a new genus of Indian affinity and a new species of *Sarcostemma*; Anacardiaceæ, including a species of the African genus *Sclerocarya*; Ebenaceæ, with a new *Diospyros*; Nyctagineæ, containing a *Pisonia*; Amaranthaceæ, represented by an *Ærua*; and Urticaceæ by a *Pilea*.

The 6 peculiar Monocotyledons, included in 5 genera of 4 orders, are amongst the most interesting of Rodriguez plants, as amongst them occur those which may be considered physiognomic. These are the Pandanaceæ (Screw Pines), of which two species, both peculiar, occur. Three others are recorded, but on insufficient evidence. It is curious that the family, though in individuals far outstripping other families, is not rich in species.

The Palms are also peculiar, excluding *Cocos nucifera* and *Phœnix dactylifera*, of which but few individuals exist. There are three species, all of Mascarene genera—*Latania Verschaffeltii*, *Hyophorbe Verschaffeltii*, and *Dictyosperma alba*, var. *aurea*. The representation of these Palms in other islands of the group by cognate species is remarkable and worthy of notice. The Rodriguez species of *Latania* is represented in Mauritius by *L. Commersonii*, also found in Bourbon; and on Round Island a third species, *L. Loddigesii*, occurs. Again, *Hyopherbe Verschaffeltii*, peculiar to Rodriguez, is represented in Mauritius and Bourbon by *H. indica*, and on Round Island there is *H. amaricaulis*. *Dictyosperma alba*, on the other hand, is a very variable Palm, and occurs in all the islands of the group, but under a different form in each. In Rodriguez it assumes a singularly graceful and delicate character, constituting a very distinct variety long known to horticulturists in this country and in Europe as *Areca aurea*.

The paucity of Orchidaceæ is a very striking feature; but we find one new species and a distinct variety of another. This paucity is more remarkable as contrasted with the profusion of this family in the sister isles, the dryness of the island and absence of forest no doubt mainly contributing to this result.

Such is a brief indication of the endemic Phænogamic vegetation of Rodriguez; and the following is a list of the species. Those marked with an asterisk have been already described; of those not so marked a description follows.

Zanthoxylon paniculatum, *Balf. fil.*
Quivisia laciniata, *Balf. fil.*
Sclerocarya castanea, *Baker.*
Eugenia Balfourii, *Baker.*
*Mathurina penduliflora, *Balf. fil. in Linn. Soc. Journ.* xv. 159.
Danais corymbosa, *Balf. fil.*
Randia heterophylla, *Balf. fil.*
Pyrostria trilocularis, *Balf. fil.*
Scyphochlamys revoluta, *Balf. fil.*
Psychotria lanceolata, *Balf. fil.*
*Psiadia Coronopus, *Hk. et Benth. Gen. Pl.* ii. 285.
P. rodriguesiana, *Balf. fil.*
Abrotanella rhynchocarpa, *Balf. fil.*
Lobelia vagans, *Balf. fil.*
*Diospyros diversæfolia, *Hiern in Journ. Bot.* N. S. iv. p. 353, t. 172.
Tanulepis sphenophylla, *Balf. fil.*
Sarcostemma odontolepis, *Balf. fil.*
Hyprestes rodriguesiana, *Balf. fil.*
H. inconspicua, *Balf. fil.*
Nesogenes decumbens, *Balf. fil.*
Clerodendron laciniatum, *Balf. fil.*
Pisonia viscosa, *Balf. fil.*
Ærua congesta, *Balf. fil.*
Pilea Balfourii, *Baker.*
Peperomia hirta, *Balf. fil.*
P. reticulata, *Balf. fil.*
P. rodriguesii, *Balf. fil.*
Euphorbia daphnoides, *Balf. fil.*
*Phyllanthus dumetosus, Poir.; *DC. Prod.* xv. 2, 398.
Listrostachys aphrodite, *Balf. fil. et S. Moore.*
Aloë lomatopylloides, *Balf. fil.*
*Latania Verschaffeltii, *Ch. Lem. Ill. Hort.* 229.
*Hyophorbe Verschaffeltii, *Wendl. Ill. Hort.* 462.
Pandanus heterocarpus, *Balf. fil.*
P. tenuifolius, *Balf. fil.*

RUTACEÆ.

ZANTHOXYLON PANICULATUM, *Balf. fil.*, sp. nov.

Arborea; ramulis validis teretibus, spinis paucis, nigrescentibus, uncinatis, arcuatis; foliis imparipinnatis 15–19, foliolatis, ad apicem ramulorum confertis, breviter petiolatis; foliolis oppositis sessilibus subcordato-oblongis, obtusis, basis inæqualiter cordatis, glabris, subcoriaceis, supra nitidis, subtus pallidioribus, costa venisque prominentibus; paniculis subsessilibus, patentibus, folio brevioribus, ramis puberulis, pedicellis brevibus; flor. ign.; capsula globosa, bivalvi, glabra, valide minuteque tuberculata, breviter stipitata; sem. ign.

Hab. in ripis fluvii Quitore prope ejus ostium. Nom. vulg. Bois Pasner.

A small tree of which only two or three specimens were seen in the locality named. Is not far removed from the Indian species *Z. Budrunga*, Wall. Hk. fil. Flor. Ind. iv. i. 495.

MELIACEÆ.

QUIVISIA LACINIATA, *Balf. fil.*, sp. nov.

Frutex glaber ramosissimus; foliis oppositis v. suboppositis, subsessilibus, adultis obovato-cuneatis, obtusis v. retusis, integris, junioribus alte pinnatifidis 3–5-lobatis in formam adultam gradatim transeuntibus, nitidis, rigide coriaceis, reticulato-venulosis; floribus in cymas axillares bifloras brevissime pedunculatas collectis, pedicellis brevibus validisque erectis v. suberectis; calyce cotyliformi, minute 4-dentato, strigoso, dentibus deltoideis; petalis 4 oblongo-ellipticis obtusis, patentibus; staminibus 8, tubo brevi; ovario dense strigoso; styli apice subito incrassato ibique strigoso et constricto; stigmate capitato leviter umbilicato, obscure 4-lobato, lævi.

Hab. In insula late dispersa. Nom. vulg. Bois Balais.

A heterophyllous species distinguished from the Mauritian *Q. filipes*, Baker, Fl. Maur. Seych. p. 46, by its heterophylly, stout floral pedicels, and larger flowers.

ANAÇARDIACEÆ.

SCLEROCARYA CASTANEA, *Baker*, *Fl. Maur. Seych.* p. 63.

Arborea, ramulis validissimis teretibus; foliis 7–11, imparipinnatis, foliolatis, ad apicem ramulorum confertis, petiolatis; foliolis oppositis sessilibus rarius brevissime petiolulatis, oblongis v. ovatis, acutis v. breviter acuminatis, basi inæqualiter rotundatis, obscure crenulatis, submembranaceis, supra nitidis glabrisque, subtus medio nervo subhirsuto; floribus dioicis (?), breviter pedicellatis in racemis brevibus sessilibus v. breviter pedunculatis solitariis in axillis foliorum terminalium dense confertis; ♀ sepalis 5 minutis rotundatis ciliatis; pe-

talis 5, oblongis obtusis reflexis imbricatis; disco crenate 10-lobato; staminibus 10 partim anantheris; ovario oblongo, glabro, stylis 5 validis, distantibus, brevibus, erectis divaricatis, sub apicem ovarii sitis; stigmatibus capitatis, spongiosis; ovulis solitariis pendulis; fruct. ign.

Hab. in vallibus prope fontes fluminum Palmiste et Mouruc.

A rare species, differing in its symmetry and crenated disk from the published description of *Sclerocarya*. It approaches the monotypic Cape genus *Harpephyllum*, Benth. & Hook. fil. Gen. Plant. i. 427, which is unfortunately imperfectly known. It may be a connecting link between these genera.

MYRTACEÆ.

EUGENIA BALFOURII, *Baker, Fl. Maur. Seych.* p. 116.

Arborea, ramosissima, ramulis glabris tetragonis; foliis breviter petiolatis oblongis v. ovali-oblongis v. oblanceolatis acutis, basi cuneatis, glabris, rigide subcoriaceis, pellucido punctatis, penninerviis, nervis tenuibus plurimis arcte positis; paniculis longe pedunculatis paucifloris axillaribus folia æquantibus glabris late patentibus; floribus sessilibus v. brevissime pedicellatis; calyce obscure dentato, dentibus deltoideis.

Hab. in valle fluvii Baleine prope fontem.

An uncommon plant having some affinity with the Bourbon *E. paniculata*, Lam. Dict. iii. 199, = *Syzygium paniculatum*, DC. Prod. iii. 259.

RUBIACEÆ.

DANAIS CORYMBOSA, *Balf. fil.*, sp. nov.

Herba scandens volubilisve, ramulis tenuibus, glabris, tetragonis; foliis oppositis breviter petiolatis oblongis v. lanceolatis acutis v. acuminatis, basi cuneatis, integris, glabris, subcoriaceis, reticulato-venulosis, subtus pallidis; stipulis minutis; cymis corymbosis axillaribus in axillis foliorum terminalium densifloris breviter pedunculatis; pedicellis erectis tenuibus brevibus; bracteolis minutissimis; calyce 5-dentato, tubo campanulato, dentibus lanceolatis; corolla hypocrateriformi, segmentis oblongo-spathulatis, acutis, patentibus, quam tubus dimidio brevioribus, fauce dense villosa; staminibus florum brevistylium longe exsertis; stylo furcato, tubum corollæ æquante, ramulis teretibus clavatis; capsula globosa, glabra.

Hab. In declivibus montis "Grande Montagne" sparse lecta.

Distinguished by its leaves and inflorescence from the Mascarene

D. fragrans, Comm. (Cordem. in Adans. x. 357), to which the species mentioned in DC. Prod. iv. 361 are reducible.

RANDIA HETEROPHYLLA, *Balf. fil.*, sp. nov.

Suffrutex glaber, ramulis tetragonis; foliis oppositis breviter petiolatis, adultis oblongis v. ellipticis, obtusis, mucronatis v. emarginatis, ad extremitatem utramque rotundatis, sæpe lanceolatis et versus extremitates attenuatis, rigide coriaceis, glabris, supra nitidis; foliis juvenilibus lineari-lanceolatis elongatis, acutis, hispidulis, gradatim in formam adultam transeuntibus; stipulis brevibus, connatis, subtruncatis; cymis solitariis, extraaxillaribus, patentibus, 1–5 floris, pedunculis glabris, petiolum longe excedentibus, bracteolis fere obsoletis; floribus sessilibus v. brevissime pedicellatis, erectis; calyce anguste infundibuliformi, minute 5-dentato; corolla hypocrateriformi, fauce breviter villosa, segmentis lanceolatis. Antheris partim exsertis, ligulatis, acutis; ovario 5-gono; fructu ovoideo oblongo 5-angulato.

Hab. in locis seclusis insulæ. Nom. vulg. Café Marron.

A remarkable heterophyllous species of a genus hitherto unknown in the Mascarene Islands.

PYROSTRIA TRILOCULARIS, *Balf. fil.*, sp. nov.

Frutex glaber, ramosus, ramulis tetragonis; foliis adultis breviter petiolatis, oblongo-ovalibus v. oblongis v. fere obovatis acutis, juvenilibus subsessilibus, linearibus, mucronatis, rigide coriaceis, marginibus leviter revolutis, glabris, nitidis, penninerviis, subtus costa prominente; stipulis connatis, deciduis, longe cuspidatis, glabris; floribus axillaribus, cæt. ign.; fructu breviter stipitato, 3- rarius 2-loculari, globoso, subtrigono.

Hab. In insula late dispersa. Nom. vulg. Bois Chauve-Souris.

A heterophyllous plant (provisionally referred to the genus *Pyrostria*) of which the seed is as yet unknown.

The plant was obtained only in fruit; and there is therefore some difficulty in determining its exact position.

SCYPHOCHLAMYS, gen. nov.

Calycis tubus campanulatus; limbus truncatus v. obscure 4-lobatus, coriaceus, persistens. *Corolla* infundibularis, tubo brevi, fauce villosa; limbi lobi 4–5 (6 ?), lanceolato-triquetri, acuti, incrassati, valvati. *Stamina* 4–5 (6 ?), ori corollæ inserta, filamentis brevibus; antheræ dorso infra medium affixæ, vix exsertæ, lanceolato-acutæ. *Discus* annularis v. pulvinaris. *Ovarium* 4–5- (6- ?) loculare; stylus validus, profunde 4-fidus; ovula in loculis solitaria, infra apicem loculi pendula. *Fructus* pyriformis, costatus. . . . (maturum non vidi). *Semina* pendula, non compressa.—Arbores parvæ, glaberrimæ, ramulis subtetragonis. *Folia* opposita, breviter petiolata, rigide coriacea, penninervia. *Stipulæ* interpetiolares, latæ, connatæ, coriaceæ, persistentes. *Flores* in capitulum 6–12-florum densum pedunculatum congesti; capitula intra bracteas duas oppositas conniventes crasse coriaceas persistentes in involucrum cyathiforme connatas inclusa.

Monotypic and endemic.

S. REVOLUTA, sp. unica.

Arbor parva, ramosa; foliis heteromorphicis, adultis breviter petiolatis ellipticis v. late ovato-oblongis nitidis venulosis, marginibus revolutis $3\frac{1}{2}$–4 poll. longis $1\frac{1}{2}$–$2\frac{1}{2}$ poll. latis (petiolo excluso $\frac{1}{6}$–$\frac{1}{4}$ poll. longo), juvenilibus linearibus 4–6 poll. longis, $\frac{1}{8}$ poll. latis; stipulis $\frac{1}{3}$ poll. longis; capitulis solitariis, axillaribus, erecto-patentibus, pedunculis petiolum excedentibus, $\frac{1}{3}$–$\frac{5}{12}$ poll. longis; involucro $\frac{1}{2}$ poll. diam. basi, intus tuberculis appressis brevibus teretibus linearibus dense vestito; corolla $\frac{1}{4}$ poll. longa, calyce triplo longiore; fructu in singulo involucro solitario.

Hab. In insula dispersa. Nom. vulg. Bois Mangue.

A near congener of *Pyrostria*. Remarkable for the large two-leaved persistent involucre embracing and enclosing the flowers, and also for its heteromorphic leaves.

PSYCHOTRIA? LANCEOLATA, *Balf. fil.*, sp. n.

Frutex glaber; ramulis tetragonis; foliis oppositis lanceolatis acutis inferne in petiolum brevem gradatim attenuatis, coriaceis; stipulis deciduis; floribus in paniculam corymbosam pedunculatam, ebracteatam v. minutissime bracteatam, in axillis foliorum superiorum congestis, minutis, breviter pedicellatis; calyce late cupuliformi truncato obscure 5-dentato; corolla subcampanulata lobis lanceolatis incrassatis tubo brevioribus, fauce dense pilosa; antheris dorso affixis, filamentis brevibus; disco magno; ovario 2-loculari; ovulo solitario in singulo loculo, erecto, basilari, oblongo-ovato compresso; stylo furcato, ramis brevibus; fruct. ign.

Hab. In declivibus montis "Grande Montagne" infrequens. Nom. vulg. Bois Lubine.

The specimens I obtained of this are very imperfect, and a final determination is impossible. Its position, therefore, in this genus is provisional.

COMPOSITÆ.

PSIADIA RODRIGUESIANA, *Balf. fil.*, sp. n.

Suffrutex, ramulis teretibus pubescentibus; foliis lanceolatis, acutis, superne profunde serratis, inferne cuneatis integrisque et in petiolum pilosum brevem attenuatis, dense pilosis, nervo centrali subtus prominente nervos 5–7 adscendentes parallelos subtus prominulos emittente; capitulis breviter pedunculatis in corymbos laxos axillares patentes dispositis; bracteis involucri glabri interioribus lanceolatis v. oblongis acutis margine submembranaceis, exterioribus brevioribus post anthesin patentibus; achæniis compressis angulatis, rugis calvis, inter rugas strigosis; pappo rigido, setoso, scabriusculo.

Hab. in locis excelsis non frequens. Nom. vulg. Bois de Ronde.

A rare shrub, quite distinct from the Mauritian species of *Psiadia*, resembling more nearly the Bourbon plants originally described under the generic name *Conyza*.

ABROTANELLA RHYNCHOCARPA, *Balf. fil.*, sp. n.

Herba pusilla, pulvinata, glabra, caulibus dense confertis; foliis imbricatis, stellatim patentibus, recurvatis, late amplexicaulibus, lyrate pinnatifidis v. pinnatipartitis, rarius simplicibus spathulatisque, acutis, coriaceis, uninerviis, nervo prominente; capitulis solitariis sessilibus, singulo 6–10-floro; involucro 6-phyllo, bracteis ciliatis, exterioribus plurinerviis latioribus, interioribus 2–3-nerviis angustioribus; receptaculo foveolato; floribus exterioribus femineis, interioribus hermaphroditis fertilibus; femineis corolla 3-dentata, basi globosa, stylo exserto breviter bifido; hermaphoditis corolla 4-dentata, antheris inclusis ovoideis acutis inappendiculatis, stylo valido, tubo corollæ subæquilongo, alte bifido, ramis ciliatis; achæniis obovatis, compressis, calvis, lente curvis, obscure 4–5-angulatis, apice in rostrum primum tortum, demum rectum elongato.

Hab. In terra calcarea juxta oram maritimam solum crescit.

A very distinct species of this curious South-Temperate-American and Australian genus hitherto unknown as Mascarene.

CAMPANULACEÆ.

LOBELIA VAGANS, *Balf. fil.*, sp. n.

Annua; caulibus repentibus tenuibus glabris; foliis membranaceis, inferioribus ovato-lanceolatis v. elliptico-ovato-acutis v. obovatis, basi cuneatis, superne crenatis, inferne integris, breviter petiolatis, superioribus linearibus acutis v. obtusis, retusis v. submucronatis, subsessilibus, crenato-serratis; floribus solitariis in axillis foliorum superiorum, pedicellatis; pedicellis bractea brevioribus; calycis tubo obconico lacinias subulatas subæquante v. breviter excedente; corollæ tubo calycis lobis quadruplo longiore, lobo inferiore obovato-oblongo acuto, superiore lineari; antheris 2 inferioribus apice barbatis, superioribus pilosiusculis; stylo longo; stigmate bilobato; capsula obovoidea.

Hab. in vallibus umbrosis prope fluminum fontes.

Distinguished from the nearly allied Mauritian *L. serpens*, Lam. (DC. Prod. vii. 368), and *L. filiformis*, Lam. (DC. *l. c.*), by its broader leaves and larger flowers.

ASCLEPIADACEÆ.

TANULEPIS, gen. nov.

Calyx minutus, 5-partitus, basi intus 5-glandulosus. *Corolla* subrotata, alte 5-fida, subvalvata; coronæ squamæ 5-lineari-lanceolatæ elongatæ, petalis subæquilongæ, antheras breviter excedentes, subincrassatæ, basi connatæ gynostegioque adhærentes. *Stamina* filamentis latis brevibusque basi annulo coronæ affixa. *Antheræ* apice cuspidatæ, conniventes; pollen granulosum in quoque loculo in massas duas subcohærens, appendicibus latis, orbicularibus corpusculorum longe stipitatorum applicitum. *Stigma* 5-gonum? *Folliculi* divaricati, tenues, subteretes, subcostati. *Semina* comosa.—Suffrutex volubilis, glaber. *Folia* opposita nitidula. *Cymæ* laxe ramosæ ad apices ramorum breviter pedunculatæ. *Flores* parvi, pedicellati. Bracteæ minutissimæ.

Monotypic and endemic.

T. SPHENOPHYLLA, sp. unica.

Caulibus tenuibus; foliis membranaceis breviter petiolatis, lanceolatis acuminatis v. oblanceolatis basi cuneatis $1\frac{1}{2}$–$2\frac{1}{2}$ poll. longis (petiolo excluso $\frac{3}{8}$ poll.), $\frac{1}{3}$–$\frac{1}{2}$ poll. latis, integris, nitidis, subtus pallidioribus penninerviis; cymis paucifloris, pedunculis $\frac{1}{18}$ poll. longis, bracteis deciduis, pedicellis $\frac{1}{3}$–$\frac{1}{2}$ poll. longis; corollæ lobis $\frac{1}{8}$ poll. longis; stipite corpusculorum appendicem duplo excedente; folliculis fusco-nigris, glabris 2–3 poll. longis, $\frac{1}{12}$–$\frac{1}{8}$ poll. latis; seminibus compressis $\frac{1}{8}$ poll. longis, latere bisulcatis.

Hab. Per insulam totam crescens.

With the monotypic East-Indian genus *Brachylepis*, W. & A. (Benth. et Hook. fil. Gen. Plant. ii. 742), it has many points of resemblance; but the elongated outer scales of the corona and their mode of attachment, as well as the character of the inflorescence, distinguish it.

SARCOSTEMMA ODONTOLEPIS, *Balf. fil.*, sp. n.

Planta aphylla scandens v. decumbens, caulibus teretibus glabris carnosis ad nodos articulatis ibique squamis minutis oppositis in loco foliorum instructis; umbellis solitariis ad nodos sessilibus breviterve pedunculatis v. terminalibus. Receptaculo paleis vestito; floribus breviter pedicellatis; calycis segmentis ovatis v. suborbicularibus concavis margine ciliatis, extus puberulis; corolla altelobata, laciniis oblongo-ellipticis glabris; corona exteriore corollæ adnata, alte 5-partita, lobis tridentatis singulo squamæ interiori adhærente, dente centrali maximo; interiore exteriorem triplo excedente, segmentis superne saccatis, dolabriformibus, gynostegio subæquilongis; stigmate apiculato, obscure bilobato, umbilicato.

Hab. in insula late dispersa. Nom. vulg. Liane Calé.

Probably merely a variety of *S. viminale*, R. Br. (DC. Prod. viii. 538), from which the only point of difference is the deeply 5-partite outer corona. I have seen one flower in which there was an arrangement of the corona exactly halfway between the two forms.

ACANTHACEÆ.

HYPOËSTES RODRIGUESIANA, *Balf. fil.*, sp. n.

Herba parva ramosissima glabra, ramis crassis lignosis; foliis longe petiolatis ovato-lanceolatis, inferne deltoideis, integris, subcoriaceis, substrigulosis; racemis breviter pedunculatis in axillis foliorum confertis, bracteis obovatis v. oblanceolatis capitula uniflora opposita arcte disposita gerentibus; involucro tubuloso, subventricoso, tetraphyllo, ad medium discreto, lobis inæqualibus, exterioribus longioribus, ovato-acutis, extus plaga lineari lateraliter notatis, interioribus lanceolatis brevioribus; calyce brevi extus hispidulo, laciniis tubo brevioribus, ciliatis; corolla alte bifida, pilosa, labiis tubo subæquilongis, superiore oblongo, inferiore tridentato v. trifido; staminibus et filamentis exsertis; ovario oblongo, compresso, glabro; stylo filiformi, exserto.

Hab. in locis excelsis montis Malartic, sparse dispersa.

A dwarfed plant allied to *H. Bojerianum*, DC. Prod. xi. 506, of Madagascar.

H. INCONSPICUA, *Balf. fil.*, sp. n.

Herba tenuis, caule repente valde articulato, ad nodos radicante; foliis oppositis distantibus ovalibus v. obovatis, obtusis v. subacutis, strigosis integris, inferne in petiolum subæquilongum longiorem attenuatis; capitulis solitariis axillaribus subsessilibus, bracteis nullis; involucro unifloro strigoso tetraphyllo, laciniis lineari-lanceolatis inæqualibusque ad medium connatis, exterioribus dimidio longioribus; calyce brevissimo lobis lanceolatis acuminatis, involucro multo breviore; corolla involucro longiore: cæt. ign.

Hab. In solo calcareo a litore remoto secus extremitatem occidentalem insulæ sparse crescit.

An ally of *H. serpens*, R. Br.; DC. Prod. xi. 501. A Mauritian plant, which has larger leaves and glabrous involucres.

VERBENACEÆ.

NESOGENES DECUMBENS, *Balf. fil.*, sp. nov.

Herba perennis diffusa, ramis laxis oppositis v. suboppositis, teretibus, tenuibus, divaricatis humifusis, glabris sed versus extremitatem biseriatim pilosis; foliis oppositis lanceolatis v. rhomboideis, acutis, integris, margine ciliatis, inferne in petiolum brevem attenuatis, siccitate non nigrescentibus; floribus in 1–2-floras cymas axillares dispositis; pedicellis brevissimis pubescentibus; calyce amplo ¼ poll. longo, alte 5-dentato, dentibus acutissimis, crenatis, extus intusque glandulosis; corollæ lobis subæqualibus rotundatis, tubo quintuplo v. sextuplo brevioribus; antheris oblongis; fructu lævi compresso, apice hispido, basi glabro, stylo mucronato, calyce cincto.

Hab. In solo calcareo secus extremitatem occidentalem insulæ loco singulo reperta.

An interesting species of a hitherto monotypic Polynesian genus.

CLERODENDRON LACINIATUM, *Balf. fil.*, sp. nov.

Frutex v. arbor parva; foliis oppositis petiolatis, coriaceo-membranaceis poroso-punctatis, adultis ovatis v. ovato-oblongis, acutis basi subdeltoideis, integris, glabris, subtus pallidis, juvenilibus filiformiter tripinnatipartitis, segmentis distantibus puberulis ligulatis obtusis per formas intermedias in adultam transeuntibus; cymis axillaribus breviter pedunculatis, paucifloris, bis trifidis, patentibus, bracteolis minutissimis; calyce cupuliformi truncato, ore integro v. obscure lobato glabro, demum patulo; corolla infundibuliformi, calycem sextuplo excedente, tubo intus resinoso-papillato, laciniis obtusis tubo brevioribus, genitalibus breviter exsertis.

Hab. In insula late diffusum. Nom. vulg. Bois Cabri.

C. heterophyllum, R. Br. (DC. Prod. xi. 660), of Mauritius, is a near ally, but differs in the character of its heterophylly and in the flowers.

NYCTAGINACEÆ.

PISONIA VISCOSA, *Balf. fil.*, sp. nov.

Arbor non armata, foliis petiolatis ovatis v. obovatis, obtusis v. acutis, v. breviter cuspidatis, basi deltoideis, subrepandis, membranaceis, primo subpuberulis demum scabrulis, siccitate nigrescentibus; petiolo tenui. ♂ panicula corymbosa in axillis foliorum terminalium oriente, brunneo-pubescente, densa; pedunculo compresso, bracteolis minutis deciduis; perianthio infundibuliformi extus piloso, breviter 5-dentato, dentibus reflexis; staminibus 13 exsertis. ♀ panicula laxe lateque patente, pedicellis erecto-patentibus; perigonio elongato, 5-angulato, angulo singulo brevibus uncinatis glandulosis tuberculis seriatim instructo.

Hab. In littore crescit. In insula Frigate frequenter, sed in Rodriguez rarius invenitur. Nom. vulg. Bois Mapou.

The bristly fruit completely filled by the seed, amongst other characters, distinguishes this from *P. ovalifolia*, DC. Prod. xiii. 2, 441, a Mauritian species, of which probably *P. lanceolata*, DC. Prod. xiii. 2, 442, is a variety.

AMARANTHACEÆ.

ÆRUA CONGESTA, *Balf. fil.*, sp. nov.

Herba perennis, dense cæspitosa, ramosissima, pulvinata, ramis firmis, lignosis, humifusis; foliis alternis, petiolatis, obovato-spathulatis, obtusis v. acutis, subcoriaceis, glabris, junioribus subtus pilosis; spicis in axillis villosis foliorum superiorum sessilibus, solitariis, oblongis v. subrotundatis erectis; bracteolis deltoideis perianthio brevioribus, glabris; perianthii segmentis oblongo-lanceolatis uninerviis, exterioribus duobus latioribus pilosiusculis, interioribus tribus angustioribus denseque pilosis; staminodiis minutissimis, antheris rotundatis; utriculo compresso suborbiculari glabro; semine inæqualiter reniformi, minute tuberculato, margine obtuso.

Hab. In terra calcarea solum crescit.

A very distinct species, unlike any other Mascarene.

URTICACEÆ.

PILEA BALFOURII, *Baker, Fl. Maur. et Seych.* p. 276.

Herba parvula monoica perennis glaberrima, caule brevi 4-gono, basi cæspitose ramoso, ramis patentibus oppositis exsiccatis cystolithiferis; stipulis deltoideis minutissimis; foliis oblanceolato-rhomboideis acutis v. acuminatis, basi cuneatis, superne alte inciso-crenatis, inferne integris triplinerviis, nervis usque ad apicem productis, lamina exsiccata membranacea, paginis utrisque cystolithis linearibus suffultis; cymis patentibus, multifloris, breviter pedunculatis, axillaribus, petiolo brevioribus; floribus breviter pedicellatis; ♂ perianthio bilobato, lobis concavis, subcucullatis, acutis; ♀ achæniis lævibus, acute marginatis, compressis, ovoideis, vix segmentum intermedium perigonii superantibus.

Hab. in locis humidis umbrosisque in vallibus prope fontes fluminum.

Distinguished from the nearly allied Mauritian *P. cuneiformis*, Wedd. (DC. Prod. xvi. 133), by the habit, spreading inflorescence, and long petiolate leaves.

PIPERACEÆ.

PEPEROMIA HIRTA, *Balf. fil.*, sp. nov.

Herba repens, pilosus, caule simplici v. ramoso e nodis radicante; foliis oppositis petiolatis ellipticis v. oblongo-ellipticis v. obovatis, 5-nerviis, utrinque villosis, nervulo obscuro juxta marginem currente, petiolo villoso; cæt. ign.

Hab. In locis siccis scopulosisque sparse crescit.

The Mauritian species *P. elliptica*, Dietr. (DC. Prod. xvi. 440), is the nearest ally; but its non-pilose character sufficiently separates it.

P. RETICULATA, *Balf. fil.*, sp. nov.

Herba carnosa repens, caule simplici v. uniramoso, in parte inferiore e nodis radicante, versus apicem adscendente; foliis oppositis, petiolatis, summis ternis, elliptico-rhomboideis, apice emarginulatis v. acutis, utrinque glabris 5-nerviis et reticulato-venulosis, nervulo obscuro juxta marginem currente; amentis solitariis axillaribus, breviter pedunculatis, folia terminalia superantibus, bracteis subrotundatis peltatis breviter stipitatis; ovario globoso immerso; stigmate umbilicato prominente, glabro.

Hab. in locis excelsis umbrosisque insulæ.

A species nearly allied to the Indian *P. dindygulensis*, Miq. (DC. Prod. xvi. 442) but distinguished by its glabrous shortly petiolate leaves.

P. RODRIGUESIANA, *Balf. fil.*, sp. nov.

Herba repens ramosissima carnosa, caulibus ad nodos radicantibus subpilosis; foliis oppositis petiolatis obovato-ellipticis, basi cuneatis obtusis, utrinque glabris, ciliolatis, subtus albido-pallidis subtiliter 3–5-nerviis, enervulosis, petiolo piloso; cæt. ign.

Hab. In locis umbrosis sparse crescit.

Has a close affinity with *P. Ventenatii*, Miq. (DC. Prod. xiv. 446), an East-Indian species.

EUPHORBIACEÆ.

EUPHORBIA DAPHNOIDES, *Balf. fil.*, sp. nov.

Suffrutex, caule tenui, ramulis lignosis teretibus; foliis ad apicem ramulorum confertis, breviter petiolatis, oblanceolatis, obtusis, mucronatis, tenuiter coriaceis, glabris, cito deciduis, exstipulatis; cymis terminalibus, pedunculatis, bracteis 2 magnis coriaceis ovalibus v. suborbicularibus mucronatis, v. retusis v. emarginatis; involucris campanulatis breviter pedicellatis glabris, lobis brevibus, glandulis 5 rubris rotundatis v. lunatis poroso-punctatis integris; stylo brevi; capsula glabra depressa trisulcata, transverso diametro majore, coccis paulum compressis, seminibus ovoideis irregulariter papillatis glabris.

Hab. in valle "Riviere de l'Est" solum.

A very distinct species.

ALOË LOMATOPHYLLOIDES, *Balf. fil.*, sp. n.

Subacaulescens, foliis stellatim patentibus ensiformibus, versus apicem gradatim attenuatis, acutis, dentibus deltoideis paulum incurvatis subrigidis armatis, carnosis, subtus convexis, supra concavis, paginis lævibus, atroviridibus; scapo ramoso, striato, compresso, inferne subalato, alis obscure dentatis, ramulis 2–3 adscendentibus racemos densos gerentibus; bracteis lanceolatis membranaceis; floribus breviter pedicellatis; perianthio obclavato, segmentis lanceolatis, tubum oblongum rectum dilatatumque dimidio superantibus; staminibus perianthio subæquilongis, filamentis membranaceis alatis, basi dilatatis; capsula angulari ovoidea.

Hab. In insula late diffusa. Nom. vulg. Ananas Marron.

PANDANACEÆ.

PANDANUS HETEROCARPUS, *Balf. fil.*, sp. n.

Arbor ramosa, caudice lævi, radicibus aëreis plurimis, ramis patentibus; foliis lanceolato-acuminatis, basi amplexicaulibus dilatatis, erecto-patentibus coriaceis strictis viridescentibus, basi sæpe glaucescentibus subplanis, marginibus per totum costaque subtus a medio distanter rubro-spinosis spinulis subincurvatis; ♀ capitulis solitariis globosis subdepressis v. elliptico-oblongis, nunc longe nunc breviter pedunculatis, pendulosis v. inclinatis, spathis pluribus brevibus deciduis; drupis 2–5-locularibus obpyramidalibus non compressis 5-6-gonis, fere per totum coadunatis, apice breviter pyramidali, rarissime convexo sæpius applanato v. umbilicato, distincte 5–6-angulato, areola centrali stigmata plana sessilia reniformia suberosa cingente.

Hab. Per insulam totam late dispersus. Nom. vulg. Vacoa Calé rouge; V. Calé blanc; V. Sac; V. Poteau; V. Parasol.

A very variable species, approaching *P. utilis*, Bory, Voy. ii. 2, but distinguished by habit, and by its drupes with wide and flattened summits.

P. TENUIFOLIUS, *Balf. fil.*, sp. n.

Arbor parva, caudice lævi, radicibus aëreis paucis, ramis erectis crassis; foliis anguste lineari-lanceolatis acuminatissimis, apice subflagellatis, basi dilatatis lateque amplexicaulibus, coriaceis recurvatis pendulisque, subplanis, atroviridibus, saepe basi dealbatis, marginibus subincrassatis, per totum costaque a medio rubrospinosis, spinis brevibus acutis, incurvatis, adscendentibus; capitulis solitariis pendulosis, pedunculo curvato, paucidrupatis, subglobosis; spathis pluribus, deciduis; drupis subpyriformibus, 2–5-locularibus non-compressis, usque ad $\frac{2}{3}$–$\frac{3}{4}$ a basi coadunatis, parte conjuncta 5–6-gona obpyramidali, apice libero rubiginoso rotundato umbraculiformi obscure 5–6-angulato, vertice applanato v. depresso, areola marginata stigmata plana sessilia reniformia cingente.

Hab. In vallibus montibusque a litore remotis crescit. Nom. vulg. Vacoa Chevron.

A species belonging to the *Utilis* group, and by some (perhaps hybrid) forms approaching very near *P. heterocarpus*, but easily distinguished when typical by habit, the narrow drooping leaves, and the large drupes with rounded apices.

A very marked feature in the Rodriguez flora, and one worthy of special notice, is the variability in size, form, and habit exhibited by the leaves of many plants at different stages of growth. The variation is confined almost absolutely to small trees and shrubby plants, occurring in seventeen species, all of which are either endemic or Mascarene, one only extending into Africa. The young plant, in these heterophyllous species, produces leaves of a lower stage of development than the adult; and as the individual grows older the leaves successively developed are more like those of the mature tree, until at a certain age only the form of leaf typical of the adult is produced. But in an adult plant, should any adventitious shoots be given off from the stem below its first branching, these have the juvenile, not the adult form. The heteromorphism varies greatly in degree and kind; but each species presents variations always of the same kind. Whether all the species of the same genus on the island exhibit, when they vary, the same type of heterophylly, I had no opportunity of determining; certainly representative species in the adjacent islands do not always do so. The phenomenon is confined to no special family; but it is worthy of note that of Rubiaceæ no less than four species exhibit it.

We may best understand the variations in size and form by considering that there are three types of variations.

In the first the difference between the leaves of the young and the adult is mainly one of size, the relative proportion of length and breadth of lamina being the same in both; and in each the margins of the lamina are usually entire. Sometimes the parenchyma is deficient at the margin in the juvenile, so that it is slightly spiny, this character gradually disappearing in the adult. This kind of heterophylly is observed in three species—*Ludia sessiliflora*, *Fernelia buxifolia*, *Carissa Xylopicron.*

The second kind of variation results from the non-development in breadth of the leaves of the young plant, usually accompanied by a great increase in length, the relative proportion of length to breadth of lamina being vastly different in the juvenile form from what it is in the adult. The lamina is entire, developing equally, though toothings characteristic of the adult may be seen; but it is never lobed or cleft. The leaves in the young plant are thus more or less linear or lanceolate, and, as a rule, greatly exceed the adult in length, being sometimes twice or thrice as long. This is the commonest kind of variation, occurring in nine species, viz. *Dombeya ferruginea*, *Elæodendron orientale*, *Terminalia Benzoin*, *Fœtidia mauritiana*, *Mathurina penduliflora*, *Randia heterophylla*, *Pyrostria trilocularis*, *Scyphochlamys revoluta*, and *Diospyros diversifolia*. Only in *Pyrostria trilocularis* and *Diospyros diversifolia* the linear juvenile leaves do not greatly exceed the adult in length. Probably *Eugenia cotinifolia* is also heterophyllous after this type.

In four species the third type of heteromorphism is seen. Here the lamina in the leaves of the young plants develops unequally, and thus a lobed or cleft leaf is formed; but the relative proportion of length to breadth of lamina is the same in both juvenile and adult. The amount of lobation in the juvenile leaves varies; they may be even twice or thrice cleft; and according as the leaf is pinnately or radiately veined, the leaf is pinnatifid, or palmatifid. The species in which this type is seen are *Aphloia mauritiana*, *Hibiscus liliiflorus*, *Quivisia laciniata*, and *Clerodendron laciniatum*. In *Hibiscus liliiflorus* the palmatifid form occurs; the other three are pinnatifid. In *Abrotanella rhyncocarpa*, a small Composite herb, the leaves as they get older tend to become pinnatifid, the young being quite entire. Its variation, then, is the converse of this third type.

In addition to the alteration in form, there is often a difference between the habit and consistence of the leaves in the juvenile and adult plants. *Dombeya ferruginea* shows this very well. Its green glabrous juvenile leaves are, in the adult, clothed on the under surface with a dense brown tomentum. The converse is sometimes seen, for instance in *Randia heterophylla*, where pubescent juvenile leaves become glabrous in the adult. As to consistence, the hard rigid young leaves of *Ludia sessiliflora* and *Carissa Xylopicron* become in the male more flaccid and coriaceous.

It is curious that *Hibiscus* (*Paritium*) *liliaceus* is not heterophyllous in Rodriguez, though it is recorded as being so on the coast of Africa; and this is the more remarkable if, as Mr. Dyer suggests (Linn. Soc. Journ. xv. 83), *H. tricuspis* is merely an insular form of this plant.

The Tropical Ferns collected by Professor Steere in the years 1870–75. By M. W. Harrington, M.A., F.L.S., Assistant Professor of Botany, University of Michigan.

[Read March 1, 1877.]

In the following list the American ferns were collected earliest, and are mostly from the Andes of Peru and Ecuador. The Formosan and Philippine ferns were collected in 1874–75. The specimens were in part identified by me before bringing them to Kew, where Mr. Baker completed the identifications, thus eliminating the novelties for me. My special thanks are due to Mr. Baker, who has aided me much, and to the authorities at Kew, who gave me free access to the herbarium and library.

The order of arrangement is that of Hooker and Baker's 'Synopsis Filicum;' and before each new species I have given the number nearest to which they would fall in the series as given there.

I. Old-World Forms.

Gleichenia dichotoma, *Willd.*	Posia, Formosa.
Cyathea spinulosa, *Wall.*	Balabac Is., Philippines.
Alsophila latebrosa, *Hooker.*	Luzon, Philippines.
Dicksonia Barometz, *Link.*	Posia, Formosa.

14*. Hymenophyllum thuidium, *Harrington*, n. sp.

Stipe slender, 1–3 inches high, winged, from 2–5 in. long, 1–2 in. broad, ovate to oblong, tri- or quadripinnate, erect; rachis and branches winged like the stipe; pinnæ 1 in. long or less, deltoid; wing and ultimate divisions of lamina finely crisped throughout; surface glabrous; sori few to many on the upper part of the frond, at the ends of the ultimate divisions, large; involucre divided nearly to the base; valves large, ovate, crisped.

Mountains of Panay, Philippines, growing thickly on the trunks of trees.

The finely crisped wing and margin of the pinnæ give the plant a resemblance to some of the mosses; hence the name assigned to it. The margins are sometimes denticulate; and exceptionally pubescence is present. The plant has affinity with *H. tortuosum*, Hooker; but it is nearer *H. crispum*, H. B. K.

Hymenophyllum polyanthos, *Swartz*. Luzon.

H. javanicum, *Spreng*. Luzon.

H. dilatatum, *Swartz*. Luzon. New to this locality.

H. tunbridgense, *Smith*. Luzon. Not found here before.

67*. H. fraternum, *Harrington*, n. sp.

Stipe slender, 2 inches high, winged; frond 2½ inches long, 1½ inch broad, oblong, erect, tripinnatifid; rachis and branches winged; pinnæ ovate, ¾ in. long or less; ultimate divisions linear; margin of wing and lamina crisped, denticulate; sori terminal, sessile, medium in size, scattered over the frond; involucre the width of the ultimate divisions, cleft to the base; valves elliptical, laciniate at the apex, elsewhere entire and crisped.

A single plant was found growing with the *H. thuidium*, as described. The denticulate margins and laciniate valves locate this plant near *H. tortuosum*, Hooker.

H. Neesii, *Hooker*. Luzon.

Trichomanes parvulum, *Poiret*. Luzon.

T. saxifragoides, *Presl*. Ternate.

T. digitatum, *Swartz*. Luzon.

T. pallidum, *Blume*. Luzon.

T. auriculatum, *Blume*. Luzon; Formosa.

T. Smithii, *Hooker*. Luzon.

T. apiifolium, *Presl*. Luzon.

Several specimens of this species were found of uniform size and mature, but only about 5 inches high; probably a local variety of the species.

T. rigidum, *Swartz*. Luzon.

Davallia parallela, *Wallich*. Amboyna.

D. pedata, *Smith*. Luzon; Formosa; Swatow, China.

D. affinis, *Hooker*. Luzon. Locality new.

D. vestita, *Blume*. Luzon; Swatow, China.

D. hymenophylloides, *Baker*. Luzon. Locality new.

D. pulchella, *Hooker*. Luzon; near top of volcano, Ternate.

D. repens, *Desv*. Luzon.

D. contigua, *Swartz*. Luzon.

DAVALLIA PENTAPHYLLA, *Blume*. About 2500 feet up the sides of the volcano at Ternate.

D. ELEGANS, *Swartz*. Luzon.

D. HOOKERIANA, *Wallich*. Tsuisia, Formosa.

D. STRIGOSA, *Swartz*. Interior of Formosa.

63*. D. (MICROLEPIA) PHILIPPINENSIS, *Harrington*, n. sp.

Caudex clothed thickly with narrow rufous scales; stipe about 6 inches long, dark brown, with a few scales below like those of the caudex, glabrous above; frond deltoid, 3–9 inches long, with about the same width; rachis glabrous; lower pinnæ deltoid and again pinnate, the upper becoming simple, at the apex confluent; pinnules linear, crenately lobed, with the divisions extending halfway to the midrib; the first pinnules on the lower side much larger than the others; texture coriaceous; surface glabrous; venules immersed, ascending; involucre decidedly intramarginal, broader than deep.

Mount Mahayhay, Luzon. Near *D. amboynensis*, Baker.

D. TENUIFOLIA, *Swartz*. Kelung and Posia, Formosa; Swatow, China.

LINDSAYA CONCINNA, *J. Sm.* Luzon.

L. FLABELLULATA, *Dry*. Tsuisia and Kelung, Formosa.

Several forms were found. The pinnæ may be short and rounded or long cuneate, entire or sharply serrate; the lower pinnæ may be simple or again pinnate.

L. LOBATA, *Poiret*. Luzon and Balabac and Philippines.

L. DAVALLIOIDES, *Blume*. Luzon. New locality.

ADIANTUM LUNULATUM, *Burm*. Luzon, Formosa.

A. CAUDATUM, *L.* Taiwan fu, Formosa.

A. CAPILLUS-VENERIS, *L.* Laisia, Formosa.

A. FLABELLATUM, *L.* Kelung, Formosa.

CHEILANTHES TENUIFOLIA, *Swartz*. Balabac Is., Philippines.

C. FARINOSA, *Kaulf.* Elevated mountains, Formosa.

ONYCHIUM JAPONICUM, *Kunze*. Taiwan fu and Poisia, Formosa.

PTERIS LONGIFOLIA. Taiwan fu and Takoa, Formosa.

P. CRETICA, *L.*, var. STENOPHYLLA. Laisia, Formosa.

P. SERRULATA, *L. fil.* Tamsui, Formosa.

P. ENSIFORMIS, *Burm.* Tamsui, Formosa.

P. SEMIPINNATA, *L.* Posia, Formosa.

——, var. DISPAR. Kelung, Formosa.

Pteris quadriaurita, *Retz.* Kelung, Formosa.

P. aquilina, *L.* Hong Kong.

P. incisa, *Thunbg.* Luzon; Formosa.

12*. Lomaria areolaris, *Harrington*, n. sp.

Caudex long, slender, twisted, naked; stipe 6 inches long in the sterile, nearly twice as long in the fertile fronds, glabrous; barren frond ovate, 4–6 inches long, 3–4 in. broad, pinnate; pinnæ 7–9, lateral nearly sessile, terminal stalked, form linear-lanceolate, 2–3 inches long, ½–¾ in. broad, acute, finely serrate, obtuse or rounded at the base; texture coriaceous; nerves forming a series of arches close to the midrib, thus forming on each side a row of long narrow areolæ parallel to the midrib; beyond this, nerves are free and simple or forking; surface naked, except that the midribs and nerves are a little chaffy below; texture subcoriaceous; fertile pinnæ 7–9, narrowly linear, 1½–2 inches long rather distant; indusium narrow, marginal.

Growing among the leaves of a *Pandanus*, Mount Mahayhay, Luzon.

The venation of this plant is peculiar in the genus, as there is no other species known in which the veins always unite to form areolæ. Were it not for the indusium, which is readily overlooked, except in young plants, the specimens would be placed in the genus *Acrostichum*, group *Stenochlæna*. The species could fairly form by itself a subgenus of *Lomaria*, characterized by its peculiar venation.

Blechnum orientale, *L.* Tsuisia, Formosa.

Woodwardia radicans, *Smith.* Laisia, Formosa.

W. japonica, *Swartz.* Tsuisia, Formosa.

Asplenium nidus, *L.* Amboyna; Luzon.

A. Wightianum, *Wall.* Luzon. New locality for this plant.

A. tenerum, *Forst.* Luzon.

A. lunulatum, *Sw.* Mountains of Panay, Philippines.

64*. A. Steerei, *Harrington*, n. sp.

Stipe dark grey, 5–6 inches long, firm, with a few small, brown, scattered scales; frond 8–10 in. long, 2–2½ in. broad, oblong-lanceolate; pinnæ 12–15 on each side, short-petioluled, 1½–2 in. long, ½ in. broad, apex acute, margin coarsely crenate, unsymmetrical; upper side abrupt at the base with a more or less distinct large lobe; lower side obliquely truncate; lower pinnæ slightly deflexed; texture firm, herbaceous; surface dark green above, brownish below; veins distant, simple, or once forked; sori 2–8 in a row on each side of the midrib, regular, falling a little short of midrib and margin.

Growing in small clusters on tree-trunks, Mount Mahayhay, Luzon.

This species has affinities with *A. lunulatum*, Sw., *A. persicifolium*, J. Sm., and *A. obtusifolium*, L.

ASPLENIUM RESECTUM, *Smith.* Mountains east of Changwha, Formosa.

A. AFFINE, *Swartz.* Luzon.

A. LANCEUM, *Thunb.* Kelung, Formosa.

A. CULTRATUM, *Mett.* Luzon.

A. BANTAMENSE, *Baker.* Balabac Island, Philippines.

A. JAPONICUM, *Thunb*, var. COREANUM, *Baker.* Changwha, Formosa.

A. LATIFOLIUM, *Don.* Tsuisia, Formosa.

DIDYMOCHLÆNA LUNULATA, *Desv.* Luzon.

ASPIDIUM ACULEATUM, *Sw.* Luzon.

A. AMABILE, *Blume.* Posia, Formosa.

A. VARIUM, *Sw.* Posia and Kelung, Formosa.

A. ARISTATUM, *Sw.* Luzon; Posia, Formosa.

A. FALCATUM, *Sw.* Kelung, Formosa.

NEPHRODIUM DECURSIVO-PINNATUM, *Baker.* Posia, Formosa.

N. IMMERSUM, *Hooker.* Sides of volcano, Ternate.

53*. N. (LASTREA) LUERSSENI, *Harrington*, n. sp.

Stipes clustered, firm, shining, light purplish; frond 1½–2½ feet long, 6–10 inches broad, oblong, tapering abruptly to the base; pinnæ 4–8 inches long, 1–1½ inch broad, lanceolate, acuminate, jointed at the base, cut down almost to the rachis (rarely quite to the rachis) into numerous linear or oblanceolate lobes, which are 1–1½ inch long and 1–1½ line broad; the lowest pinnæ very small; texture membranaceous; surface naked; veinlets 8–12 on a side, simple, free, distant; sori one for each vein, marginal.

Bulukai Island, Philippines. Growing in clusters on the margin of a pond. Nearly related to *N. prolixum*, Baker.

N. FILIX-MAS, *Rich.* Ternate.

N. EATONI, *Baker*, var. FORMOSANUM, *Harrington*, n. var.

Smaller and more robust than the type; the sori are larger and more crowded.

N. ODORATUM, *Baker.* Near Takow, Formosa. New to Formosa.

155*. N. BAKERI, *Harrington*, n. sp.

Stipes clustered, light brown, villose or scaly, 2–5 inches long;

frond 3–6 inches long, ½–1 inch broad, oblong-oblanceolate, obtuse, coarsely crenate, the divisions extending about one third the distance to the midrib, with usually 2–4 distant, oblong-obovate, sessile pinnæ at the base, rather smaller than the lobes; texture papyraceous; surfaces villose throughout; venules usually 6 on each side, of which 4 unite with the opposite venules of the adjacent lobe; indusium small, hairy, rarely present.

Found growing in small clusters on the ground in very shaded places. Mountains of Panay island, Philippines.

This plant is closely related to Hooker's *N. Skinneri* and *N. scolopendrioides*; but they are both American forms.

NEPHRODIUM SOPHOROIDES, *R. Brown.* Tsuisia, Formosa.

A reduced form of this plant, probably merely starved, was found in Formosa. The fronds are only 4–6 inches long (with the stipe); the pinnæ are obtuse, and broader; texture coriaceous. Mr. Baker suggests that it bears the same relation to *N. sophoroides* that *N. latifolium* does to *N. molle.*

N. MOLLE, *Desv.* Swatow, China.

N. TRUNCATUM, *Presl.* Luzon.

202*. N. (SAGENIA) SUBPEDATUM, *Harrington*, n. sp.

Stipe 1 foot long, slender, stramineous; frond 6–8 inches long, 5–7 in. broad, ovate, simple, 5-lobed, the lower divisions slight, the upper extending two thirds of the way to the base; apex acuminate, base cordate, margin slightly undulate; the central lobe is largest, ovate; texture papyraceous; areolæ copious, each with 1–3 included free veinlets; veins distinct nearly to the margin; sori few, small, scattered.

Near Takow, Formosa.

An interesting fern, but only two specimens, only one of which is fruiting. I have not found the indusium; but its close resemblance to *N. ternatum*, Baker, leads me to place the species in the genus *Nephrodium.* It may possibly, with fuller material, prove not to be distinct from *N. ternatum.*

N. LATIFOLIUM, *Baker.* Formosa.

N. CICUTARIUM, *Baker.* Formosa.

NEPHROLEPIS CORDIFOLIA, *Presl.* Kelung, Formosa.

N. ACUTA, *Presl.* Luzon.

N. RAMOSA, *Moore.* Isabella de Batilan, Philippines.

N. FLOCCIGERA, *Moore.* Amboyna.

POLYPODIUM UROPHYLLUM, *Wall.* Luzon.

74*. P. (GONIOPTERIS) AORISTISORUM, *Harrington*, n. sp.

Caudex short and thick, with slender brown scales; stipes clustered, 3–6 inches long, slender, grey, slightly pubescent above; frond 6–10 in. long, $\frac{3}{4}$–$1\frac{1}{4}$ in. wide, linear-lanceolate, the lower pinnæ reflexed; pinnæ 20–40 on each side, 6–8 lines long, 3–4 lines broad, elliptical, slightly falcate, obtuse, coarsely crenate, auricled on the upper side, short-stalked or sessile; texture subcoriaceous; rachis and under surface of veins pubescent; veins pinnate, 2–3 veinlets on each side, of which usually but one unites with the opposite one of the next lobe; sori indefinite.

Mountains of Panay, Philippines. Growing in clusters on the ground.

The sporangia are scattered over the under surface of the frond, though a grouping into indefinite sori can be distinguished. The plant is related to the American *P. reptans*, Swartz.

Polypodium hirtellum, *Bl.* Luzon.

P. cucullatum, *Nees.* Luzon.

P. minutum, *Bl.* Luzon.

169*. P. (Eupolypodium) Schenkii, *Harrington*, n. sp.

Caudex thick, horizontal, densely clothed with slender brown scales; stipes clustered, 2–3 inches long, brown, pubescent, firm, erect; frond 6–12 inches long, $1\frac{1}{2}$–2 in. wide, oblong, tapering gradually above and below, pinnate; pinnæ numerous, $\frac{1}{2}$–1 inch long, 1–2 lines broad, linear, obtuse, entire, broadened and nearly confluent at the base; lowest pinnæ small, triangular; fertile and sterile pinnæ alike; texture membranous; rachis pubescent, surfaces otherwise naked; venules simple, free, falling short of the margin; sori not confined to one part of the frond, deeply immersed, margins of the depression nearly covering them, oblong, 4–8 in a row on each side of the the midvein, obliquely falling a little short of midvein and margin.

Growing in clusters on trunks of trees. Mountains of Panay, Philippines.

Nearest to *P. blechnoides*, Hooker.

169**. P. (Eupolypodium) craterisorum, *Harrington*, n. sp.

Caudex clothed with dense, brown, lanceolate scales; stipes clustered, $\frac{1}{2}$–$1\frac{1}{2}$ inch long, hirsute with brown hair, firm, erect; frond 8–12 inches long, $1\frac{1}{2}$–$2\frac{1}{2}$ in. wide, oblong or oblong-oblanceolate, tapering above and below, pinnate; pinnæ numerous, linear, about 1 inch long and 2 lines broad, obtuse, entire, broadened and more or less confluent at the base, passing below into the narrow, lobed wing of the stipe; rachis pubescent, surfaces otherwise naked; texture membranous; venules simple, free, falling short of the margin; sori confined to the upper part of the frond, immersed, oval, 5–10 in a row on each side of the midrib, about halfway between it and the margin. The edge of the cup, in which the sorus is sunk, forms a projecting rim, but does not cover the sorus.

Growing in small drooping tufts, some distance up the trunks of trees, Mount Mahayhay, Philippines.

Closely related to the *P. Schenkii* just preceding, but distinguished by its shorter stipe and by its sori, which are confined to the upper part of the frond, oval in shape and not covered by the rim of the depression.

Polypodium adnascens, *Swartz.* Ternate, Philippines.

P. lingua, *Sw.* Swatow, China.

P. accedens, *Blume.* Luzon.

299*. P. (Phymatodes) hammatisorum, *Harrington*, n. sp.

Rhizome long and slender; scales thin, membranous, long-lanceolate, light brown; stipes scattered along the rhizome, $\frac{1}{4}$–$1\frac{1}{2}$ in. long for the sterile frond, 1–3 in. long for the fertile, slender, naked, erect; sterile frond elliptical, $\frac{1}{2}$-$1\frac{1}{2}$ in. long, $\frac{1}{4}$–1 in. broad, obtuse, coarsely and shallowly crenate, except at the tapering base; sterile frond linear, 2–5 in. long, 2 lines broad, with a lobe under each sorus; texture coriaceous; surfaces smooth; veins immersed; midrib distinct; sori about 20 in a row on each side of the midrib, nearly opposite, large, giving the fertile frond a knotted appearance.

Growing on fallen timber, Mount Mahayhay, Luzon.

A very distinct plant, related to *P. rostratum*, Hooker.

311*. P. (Phymatodes) Steerei, *Harrington*, n. sp.

Stipes very short or none; frond 5–12 in. long, 1–$2\frac{1}{2}$ in. broad, simple, oblong-oblanceolate, obtuse to acuminate above, gradually tapering below; margin entire, slightly thickened; surfaces naked; texture coriaceous; midrib strong; sori copious, small, irregularly scattered, on the ends of free or backs of united veinlets; areolæ abundant, irregular.

Shaded places under overhanging rocks, Apes' Hill, Takow, Formosa.

Near *P. superficiale*, Blume, but distinguished by its thicker texture, smaller and more numerous sori, and the very short stipe.

P. triquetrum, *Bl.* Ternate.

P. heterocarpum, *Blume*, var. *β*. Zippellii, *H. & B.* Philippines.

Polypodium hastatum, *Thunb.* Kelung and Posia, Formosa

P. pteropus, *Blume.* Posia, Formosa.

P. dipteris, *Blume.* Luzon.

P conjugatum, *Lam.* Hongkong; Posia, Formosa.

P. Fortunei, *Kunze.* Changwha, Formosa.

P. palmatum, *Blume.* Luzon.

P. Moseleyi, *Baker.* Side of Volcano, Ternate.

Recently described by Mr. Baker from specimens collected in the same place by the 'Challenger' Expedition.

Nothochlæna hirsuta, *Desv.* Taiwan fu, Formosa.

Monogramme Junghuhnii, *Hooker.* Kelung and Posia, Formosa.

Gymnogramme lanceolata, *Hooker.* Near Takoa, Formosa.

G. Wrightii, *Hooker.* Kelung and Posia, Formosa.

G. macrophylla, *Hooker.* Luzon.

G. elliptica, *Baker.* Posia, Formosa.

Meniscium triphyllum, *Sw.* Posia, Formosa.

Antrophyum immersum, *Mett.* Amboyna; Philippines.

A. plantagineum, *Kaulf.* Amboyna; Mts. of Formosa.

A. callæfolium, *Blume.* Mts. of Panay, Philippines.

A. semicostatum, *Blume.* Luzon.

Vittaria elongata, *Sw.* Amboyna; Luzon; Balabac Formosa.

V. falcata, *Kunze.* Luzon.

V. lineata, *Sw.* Amboyna.

Drymoglossum carnosum, *Hooker.* Amboyna.

Same, var. obovatum, *Harrington*, n. var.

Sterile fronds obovate, ½–1 inch long, ¼–½ in. broad, with a stipe ¼–½ in. long; fertile frond 1–1½ in. long, stipe ½–1 in. in length, sori close to the midrib; areolæ including each, only one free veinlet.

Climbing on trees, Posia, Formosa.

This variety falls between *D. carnosum* typical form and the variety *subcordatum*.

Same, var. subcordatum, *Hook. & Baker.* Tamsui, Formosa. Smaller than the preceding.

D. piloselloides, *Presl.* Luzon.

Hemionitis cordata, *Roxb.* Formosa.

Hemionitis Zollingeri, *Kurz.* On exposed rocks, not very elevated, Mts. of Panay, Philippines.

Acrostichum latifolium, *Sw.* Luzon.

A. quercifolium, *Retz.* Formosa.

No fruiting fronds found; but the species is unmistakable.

A. aureum, *L.* Balabac, Philippines.

A. spicatum, *L.* Ternate.

A. platyrhynchos, *Hooker.* Luzon.

Osmunda javanica, *Blume.* Hongkong.

Lygodium dichotomum, *Sw.* Balabac, Philippines; Amboyna.

L. scandens, *Sw.* Luzon; Posia, Formosa; Swatow, China.

Angiopteris erecta, *Hoffm.* Luzon.

Ophioglossum pendulum, *L.* Amboyna.

Helminthostachys zeylanica, *Hooker.* Balabac, Philippines.

Lycopodium cernuum, *L.* Old part of crater, Ternate.

L. phlegmaria, *L.* Luzon.

Selaginella atroviridis, *Spring.* Hongkong; Posia, Formosa.

Selaginella. Mts. of Panay, Philippines.

Without fruit; near *S. caulescens*: probably a new species.

II. American Forms.

Gleichenia pubescens, *H. B. K.* Mountain-tops, Cumbassauma mts., Peru.

Alsophila ferox, *Pr.* Pebas, Peru.

Woodsia mollis, *J. Sm.* Matucana, Peru.

W. obtusa, *Hooker.* Peru; Ecuador.

Hymenophyllum polyanthos, *Swartz.* Peru; Ecuador.

Trichomanes brachypus, *Kunze.* Pebas, Peru.

T. crispum, *L.* Peru.

A very variable species.

Davallia inæqualis, *Kunze.* Peru.

Cystopteris fragilis, *Bernh.* Peru; Ecuador.

Lindsaya trapeziformis, *Dry.*, var. falcata. Peru.

Adiantum Kaulfussii, *Kunze.* Ecuador.

13*. A. Steerei, *Harrington*, n. sp.

Stipes 4–8 inches long, naked, polished, dark brown; frond rather shorter than the stipe, pinnate; pinnæ ¾–1 in. broad, ⅜–⅝ in. deep, dimidiate, lower margin straight, lateral and upper margins rounded, broadly crenate, stalk of pinnæ slender, ½ inch long below, becoming less above; uppermost pinnæ cuneate, lowest more or less completely non-dimidiate with opposite sori; texture subcoriaceous; veins free; surfaces naked throughout; sori 25 or less to a pinna, reversed reniform, as broad as deep, apparently intramarginal.

Shaded rocks, along streams of water between Myobamba and Chachapoyas, Peru; also hanging from damp rocks, Poma Cocha, Peru, July 1872.

The margins of the cuts at the base of which the sori lie are so closely approximated that the sori appear intramarginal. The plant is related to *A. Shepherdi*, Hooker, but has affinities with *A. lunulatum*, Burm., and *A. Galeottianum*, Hooker.

Adiantum macrophyllum, *Swartz.* Ecuador.
A. æthiopicum, *L.* Peru; Ecuador.
Cheilanthes Matthewsii, *Kunze.* Peru.
C. microphylla, *Swartz.* Peru.
C. myriophylla, *Desv.* Peru; Ecuador.
C. scariosa, *Kaulf.* Peru.
Pellæa geraniifolia, *Fée.* Peru.
P. ternifolia, *Fée.* Peru; Ecuador.
P. marginata, *Baker.* Peru; Ecuador.
P. cordata, *J. Smith.* Peru.
Pteris cretica, *L.* Peru.
Same, var. stenophylla. Poma Cocha, Peru.
P. aquilina, *L.* Peru.
P. pedata, *L.* Peru.
P. incisa, *Thunbg.* Contumarca, Peru.
Blechnum occidentale, *L.* Peru; Ecuador.
B. serrulatum, *Rich.* Mouth of the Amazon.
Asplenium fragile, *Presl.* Cumbassauma mts., Peru.
A. monanthemum, *L.* Peru.
A. trichomanes, *L.* Peru; Ecuador.
A. extensum, *Fée.* Peru.
A. lunulatum, *Sw.* Peru; Ecuador.
A. rhizophyllum, *L.* Ecuador.
A. auritum, *Swartz.* Peru.
A. furcatum, *Thunb.* Peru; Ecuador.
A. fragrans, *Swartz*, var. fœniculaceum, *H. B. K.* Foot of Chimborazo.

ASPLENIUM TRIPHYLLUM, *Presl.* Near Quito.

A small form from the Peruvian Andes between Motucana and Pucara.

A. CICUTARIUM, *Swartz.* Peru; Ecuador.

A. FILIX-FŒMINA, *Bernh.* Peru.

A. ACULEATUM, *Sw.* Peru.

NEPHRODIUM CONCINNUM, *Baker.* Peru; Ecuador.

N. FILIX-MAS, *Rich.* Peru.

N. EFFUSUM, *Baker.* Peru.

POLYPODIUM DELICATULUM, *M. & G.* Peru; Ecuador.

P. PLUMULA, *H. B. K.* Peru.

P. PLEBEIUM, *Schlecht.* Ecuador.

P. MURORUM, *Hooker.* Ecuador.

P. PILOSELLOIDES, *L.*, var. β, *H. & B.* Caviana, Brazil.

Same, var. γ, *H. & B.* Peru.

P. LORICEUM, *L.* Ecuador.

P. ATTENUATUM, *H. B. K.* Cairana, Brazil.

P. ADNATUM, *Kunze.* Cairana, Brazil.

P. FRAXINIFOLIUM, *Jacq.* Peru.

P. SQUAMATUM, *L.* Peru.

P. INCANUM, *Sw.* Cairana, Brazil; Peru.

261*. P. (GONIOPHLEBIUM) XANTHOLEPIS, *Harrington*, n. sp.

Rhizome with dense, lanceolate, brown scales; stipe 2–5 inches high, black, with distant, membranous, brown scales, wiry, usually with the frond more or less spirally coiled; frond 2–5 in. long, $\frac{3}{4}$–$1\frac{1}{4}$ in. broad, long, triangular to lanceolate, cut nearly to the rachis into spreading, subdistant pinnæ, $\frac{1}{2}$–$\frac{3}{4}$ in. long, linear, entire, obtuse; midrib broad, green; texture coriaceous; under surface thickly clothed with large, brown, lanceolate, membranous scales, naked above; sori large, uniserial.

Oroya, between San Bartolomeo and San Mateo, Peru.

Very near *P. incanum*, Swartz, but lacking entirely the lepidote character and silvery aspect of that species. It is also somewhat larger than the *P. incanum*.

P. AUREUM, *L.* Cairana, Brazil.

P. ANGUSTIFOLIUM, *Sw.* Near Quito.

P. SPHENODES, *Kunze.* Peru.

P. LÆVIGATUM, *Cavan.* Cairana, Brazil.

——, var. RIGIDUM, *Harrington*, n. var. Rio Utcubamba, Peru.

Texture rigid; venation entirely goniophlebioid.

Polypodium percussum, *Cavan.* Peru.

P. lanceolatum, *L.* Ecuador; Rio Utcubamba, Peru.

The specimens from the locality are all pinnately lobed nearly to the rachis. In neither lot of specimens are the sori immersed.

P. persicariæfolium, *Schrad.* Peru.

P. crassifolium, *L.* Peru.

Nothochlæna sinuata, *Kaulf.* Peru.

N. ferruginea, *Hooker.* Peru; Ecuador.

N. doradilla, *Colla.* Peru.

N. tenera, *Gill.* Peru.

N. nivea, *Desv.* Peru.

Gymnogramme pumila, *Spreng.* Brazil.

G. tomentosa, *Desv.* Peru.

G. angustifrons, *Baker.* Peru.

G. tartarea, *Desv.* Near Quito.

G. calomelanos, *Kaulf.*, var. denudata, *Harrington*, n. var. Peru.

The farina almost completely absent.

Antrophyum lineatum, *Kaulf.* Peru.

Vittaria stipitata, *Kunze.* Peru.

Tænitis angustifolia, *R. Brown.* Cairana, Brazil.

Acrostichum latifolium, *Sw.* Mountain-tops, Cumbassauma mountains, Peru.

A. scolopendrifolium, *Raddi.* Peru.

A. spathulatum, *Bory.* Near Quito.

A. muscosum, *Sw.* Ecuador; Peru.

A. squamosum, *Sw.* Mountain-tops, Cumbassauma mountains, Peru.

A. aureum, *L.* Mouth of the Amazon.

Anemia tomentosa, *Sw.* Peru.

A. phyllitidis, *Sw.* Peru.

Lygodium venustum, *Sw.* Cairana, Brazil.

Lycopodium linifolium, *L.* Peru.

Selaginella cuspidata, *Link.* Peru.

S. exaltata, *Spring.* Peru.

S. geniculata, *Spring.* Para, Brazil.

CONTRIBUTIONS TO THE BOTANY OF H.M.S. 'CHALLENGER.'

XXXVIII. Enumeration of the Fungi collected during the Expedition of H.M.S. 'Challenger,' 1874–75. By the Rev. M. J. BERKELEY, M.A., F.L.S. (Third Notice.)

[Read February 1, 1877.]

(Plate II.)

PENNANT HILLS, PARAMATTA. June 1874.

83. AGARICUS (AMANITA) VAGINATUS, *Bull.*

84. A. (ARMILLARIA) MELLEUS, *Fl. Dan.*, var. MINOR. Stipite transversim squamoso.

On dead wood.

It is very possible that this may be quite a distinct species; but in the absence of all indication as to colour, I am content to point out its affinities.

85. A. (FLAMMULA) SAPINEUS, *Fr. Hym. Eur.* p. 251.

This species in most cases probably occurs on imported deal, exactly as we have northern species on timbers in our railroads.

86. A. (PSALLIOTA) CAMPESTRIS, *L.*

87. A. (PANÆOLUS) CAMPANULATUS, *L.*

88. LACTARIUS SUBTOMENTOSUS, *B. & Rav. Ann. Nat. Hist.* Oct. 1859.

89. CANTHARELLUS CIBARIUS, *Fr. Hym. Eur.* p. 455.

90. C. CONCINNUS, *B.* Pusillus; stipite sursum incrassato, lamellis furcatis angustissimis; interstitiis lævibus.

Pileus ½ inch across; stem ½ inch high, 2 lines thick at the apex, half as much below.

91. MARASMIUS PRIMULINUS, *B.* Pileo e convexo explanato primulino, demum umbilicato pulverulento; margine striato; stipite brevi gracili furfuraceo; lamellis crassiusculis concoloribus.

Pileus ½ inch across; stem ½ inch high.

92. M. OPACUS, *B. & C. Hook. Journ.* 1849, p. 99.

93. LENTINUS FASCIATUS, *B. Hook. Lond. Journ.* 1840, p. 146.

94. PAXILLUS MÜLLERI, *B. Linn. Soc. Journ.* vol. xiii. p. 159.

95. SCHIZOPHYLLUM COMMUNE, *Fr. Hym. Eur.* p. 492.

96. BOLETUS SUBTOMENTOSUS, *L.*

97. B. ANANÆCEPS, *B. Linn. Soc. Journ.* vol. xiii. p. 161.

98. POLYPORUS (MESOPUS) OBLECTANS, *B. Hook. Lond. Journ.* 1845.

99. P. (Pleuropus) rugosus, *Nees, N. Act.* xii. tab. 7.

Sometimes the stem is central with a regular pileus; sometimes the pileus is very imperfectly developed and scarcely rugose.

100. Polyporus (Pleuropus) sanguineus, *Fr.*

101. P. (Pleuropus) rhipidium, *B. Hook. Lond. Journ.* 1849, p. 319.

102. P. (Pleuropus) peroxydatus, *B.* Tenuis suborbicularis, rubiginoso-pulverulentus; pileo leviter zonato rugoso; stipite brevi crasso; hymenio convexo ferrugineo; poris angulatis; contextu rhabarbarino.

Pores $\frac{1}{96}$ inch in diameter. Colour of pileus like that of peroxide of iron.

103. P. (Anodermei) tephronotus, *B. Fl. Tasm.* ii. p. 252.

104. P. (Anodermei) ochroleucus, *B. Hook. Lond. Journ.* 1845, p. 53.

105. P. (Anodermei) semidigitaliformis, *B.* Gregarius; pileo ungulato e mycelio tomentoso oriundo albido rugoso tomentoso; poris majoribus, postice lamellatis.

Scattered over the flat surface of dry wood. Pileus $\frac{1}{4}$–$\frac{1}{3}$ inch wide; pores $\frac{1}{10}$–$\frac{1}{36}$ inch in diameter. A very curious species which has sometimes a tendency to become imbricated.

106. P. (Placodermei) portentosus, *B. Hook. Lond. Journ.* 1844, p. 188.

107. P. (Placodermei) australis, *Fr. El.* p. 108.

108. P. (Inodermei) scruposus, *Fr. Ep.* p. 473.

109. P. (Inodermei) cinnabarinus, *Fr. Syst. Myc.* p. 371.

110. P. (Inodermei) lilacino-gilvus, *B. Ann. Nat. Hist.* iii. p. 324.

111. P. (Resupinati) obliquus, *Fr. Ep.* p. 482.

112. Trametes rigida, *B. & Mont. Syll.* p. 168.

113. T. occidentalis, *Fr.*; *Klotzsch, Linn.* viii. p. 486.

114. T. devexa, *B. Linn. Soc. Journ.* xiii. p. 165.

115. T. mollis, *Fr. Hym. Eur.* p. 585.

116. Dædalea glabrescens, *B.* Pulvinato-expansa crassa e scabro-tomentoso glabra zonata pallida, margine acuto, lamellis crassis rectis quandoque postice insigniter flexuosis.

Pileus 6 inches wide, 3 long.

Allied to *D. tenuis*, but with far thicker gills.

117. Hydnum (Mesopus) nigrum, *Fr. Hym. Eur.* p. 605.

118. H. (resupinatum) xanthum, *B. & C. Grevillea, Not. N.-Am. Fung.* p. 10, var. Aculeis non compressis pendulis totum re-

supinatum pallide aurantiacum ; aculeis subacutis e strato lætiore ceraceo oriundis.

119. STEREUM HIRSUTUM, *Fr. Hym. Eur.* p. 639.

120. S. ILLUDENS, *B. Hook. Lond. Journ.* 1845, p. 59.

121. CLAVARIA FLAVA, *Schæff.*; *Fr. Hym. Eur.* p. 666.

122. C. BOTRYTIS, *P.*; *Fr. Hym. Eur.* p. 667.

123. C. AUREA, *Schæff.*; *Fr. Hym. Eur.* p. 670.

124. GUEPINIA SPATHULARIA, *Fr. El.* p. 32.

125. TREMELLA LUTESCENS, *P.*; *Fr. Syst. Myc.* p. 213.

126. HYMENANGIUM MOSELEI, *B. & Br.* Suborbiculare basi attenuatum citrinum glabrum ; hymenio ochraceo basi distincta alba ; sporis ovatis apice attenuatis pedicellatis hyalinis lævibus.

About ½ an inch in diameter ; spores ·0006 inch long with one or sometimes two nuclei.

127. SEPEDONIUM CHRYSOSPERMUM, *Lk. Sp.* i. p. 29.

128. GEASTER MINIMUS, *Schwein. Car.* p. 327.

129. G. SACCATUS, *Fr. Syst. Myc.* iii. p. 16.

130. G. DUBIUS, *B.* Peridio externo crasso globoso lævi subtiliter pulverulento cervino, centro depresso, demum aperto, mycelio substipitiformi suffulto ; floccis fuscis, sporis minimis lævibus globosis.

About ½ an inch in diameter ; outer peridium, when dry, consisting of two distinct layers, while the mass of flocci and spores is surrounded by a thin inner peridium. As far as appears from the specimens, the outer peridium does not become stellate.

131. TRICHODERMA VIRIDE, *P.*

The conidiiferous state of *Hypocrea rufa*.

TONGATABU. July 1874.

132. POLYPORUS (PLEUROPUS) AMBOINENSIS, *Fr. Ep.* p. 442.

A stemless form on cocoa-nut stems.

133. TRAMETES MOSELEI, *B.* Imbricatus ; pileis reniformibus vertice affixis spadiceis marginem versus lætioribus rubiginosis, repetite zonatis lineato-rugosis ; contextu albo.

Pileus 3 inches across, 2 long ; pores $\frac{1}{36}$ inch in diameter.

Has somewhat the appearance of *P. Persoonii*. A very noble species.

134. COPRINUS NYCHTHEMERUS, *Bull. Fr. Ep.* p. 251.

API (NEW HEBRIDES). Aug. 18, 1874.

135. SCHIZOPHYLLUM COMMUNE, *Fr. Ep.* 403.

136. Polyporus (Placodermei) australis, *Fr. Ep.* p. 464, var. applanata.

Pores not stratose; flesh without harder parallel layers, as in the form from Ternate.

137. Hirneola polytricha, *Mont.*; *Fr. Fung. Nat.* p. 26.

Somerset, Cape York. Sept. 1-8, 1874.

138. Polyporus (Mesopus) xanthopus, *Fr. Obs.* ii. p. 255.

139. P. (Mesopus) dictyopus, *Mont. Ann. Sc. Nat.* 135, iii. p. 349.

140. P. (Anodermei) fœdatus, B. Pileo subtenui reniformi azono umbrino fuliginoso; margine pallido radiato-rugoso sterili; centextu pallido sericeo; poris punctiformibus acie obtusis pallide cinnamomeis.

Pileus 3 inches across, $1\frac{1}{2}$–2 inches long; pores $\frac{1}{96}$ inch in diameter.

141. P. (Placodermei) incrassatus, *B.* Durus reniformis; pileo primum tenui azono, demum incrassato rugoso marginem versus repetite zonato pulverulento coffeato; cuticula dura; hymenio cinnamomeo; margine demum sterili sulcato; contextu ferrugineo; poris punctiformibus, dissepimentis obtusis rigidis.

Pileus 3 inches across; pores $\frac{1}{84}$ inch in diameter.

142. Hexagona tenuis, *Fr. Ep.* p. 498.

143. Stereum prolificans, *B.* Gregarium infundibuliforme, stipite brevissimo; pileo sulcato-zonato velutino spadiceo; hymenio lævi plicato nitido brunneo.

Pileus 2 inches across, 1 inch high, with a number of young infundibuliform pilei at the base with the hymenium superior or reniform, attached by a distinct orbicular base, repeatedly zoned and sulcate, of a rich brown; hymenium dark brown, sometimes slightly zoned.

144. Hirneola rufa, *B. Ann. Nat. Hist.* vol. x. p. 384.

"These fungi were all found in the dry condition, being collected in the dry season. Some are attacked by an insect-larva whose dung takes the form of a curious fluffy mass."

Aru. Sept. 22, 1874.

145. Agaricus (Flammula) sapineus, *Fr. Hym. Eur.* p. 251.

146. A. (Panæolus) campanulatus, *L.*

147. Marasmius aruensis, *B.* Pileo centro depresso fulvo

subtiliter pulverulento; stipite gracili e basi crassiuscula oriundo e fulvo brunneo; lamellis fulvis.

Pileus $\frac{1}{2}$–1 inch wide; stem $\frac{1}{3}$–$1\frac{1}{2}$ inch high.

148. Marasmius aleurocephalus, *B.* Pileo convexo aleuriato rugoso-plicato fulvo; stipite compresso brunneo basi incrassato.

Pileus $\frac{1}{4}$ inch across; stem $\frac{1}{2}$ inch high.

Specimens few and in bad condition.

149. M. direptus, *B.* Pusillus albidus rugosissimus; pileo primum horizontali demum reflexo; stipite centrali direpto; lamellis paucis adnatis crassiusculis acie obtusis.

About $1\frac{1}{2}$ line across; stem torn off, as the pileus is turned back and left in the centre; the rugose crumpled pileus, under a lens, is very peculiar.

150. Lentinus Leveillei, *B. Linn. Tr.* xx. p. 112, and a small variety.

151. L. Hookerianus, *B. Hook. Journ.* 1851, p. 44.

152. L. strigosus, *B. Fr. El.* p. 47.

153. Polyporus (Mesopus) xanthopus, *Fr. Obs.* ii. p. 285.

154. P. (Pleuropus) affinis, *Nees, Fr. Ep.* p. 445.

155. P. (Pleuropus) cochlear, *Nees, Act. Nat. Cur.* xiii. tab. 6.

156. P. (Pleuropus) luteus, *Nees. Fr. Ep.* p. 445.

157. P. (Pleuropus) meleagris, *B.* Pileo flabelliformi stipite brevissimo affixo zonato radiato lineato brunneolo; margine lobato acutissimo quandoque striato; hymenio e pallido umbrino; poris angulatis hic illic sinuatis, dissepimentis rigidiusculis.

Pileus 2–3 inches across, $1\frac{1}{2}$ long; pores $\frac{1}{108}$ in diameter. Sometimes infundibuliform. There is a variety (a single specimen only) with a longer stem which is slightly laccate.

158. P. (Anodermei) armeniacus, *B. Hook. Journ.* 1856, p. 197; P. armeniacus, *Eng. Fl.* is P. amorphus.

159. P. (Anodermei) abruptus, *B.* Durissimus imbricatus reviviscens; pileo lignicolori hic illic rufescente glabrato; hymenio noduloso, juniore pallido, seniore pallescente; poris punctiformibus.

Pilei by confluence 2–3 inches across, adnate, and decurrent behind, very rigid, the hymenium reproduced irregularly and nodulose. A coarse species.

160. P. (Placodermei) australis, *Fr. Ep.* p. 464. A small form.

161. P. (Placodermei) zonalis, *B. Hook. Lond. Journ.* 1847, p. 504.

162. P. (Placodermei) senex, *N. & Mont. Syll.* p. 160.

163. P. (Placodermei) aruensis, *B.* Pileo dimidiato tenui sulcato-zonato radiato-rugoso primum pulverulento brunneo, margine tenuiori; hymenio concolori; poris demum elongatis; contextu ferrugineo.

Pileus 2 inches across, 1½ long; pores $\frac{1}{60}$ inch in diameter.

164. Polyporus (Inodermei) scruposus, *Fr. Ep.* p. 473. var. Pileo duro renifermi velutino repetite sulcato-zonato umbrino contextu rhabarbarino.

165. P. (Inodermei) tabacinus, *Mont. Ann. Sc. Nat.* 1835, iii. p. 349.

166. P. (Inodermei) floridanus, *B. Ann. Nat. Hist.* x. p. 376.

167. Trametes occidentalis, *Fr.*; *Klotzsch, Linn.* viii. p. 486.

168. T. cognatus, *B.* Pileo dimidiato sulcato-zonato subtiliter scabroso-tomentoso postice glabrescente ochraceo; hymenio plano, poris punctiformibus acie subtiliter tomentosis.

Pileus 1½ inch across, 1 inch long; pores $\frac{1}{180}$ in diameter. Externally resembling *F. Mülleri*, B.; but the pores are very different.

169. T. bicolor, *B.* Pileo reniformi lobato postice sanguineo, antice pallido ruguloso; hymenio umbrino; poris e subhexagonis elongatis; contextu pallido.

Pileus 2 inches across, 1 inch long; pores $\frac{1}{60}$ inch in diameter.

170. Hexagona arata, *B.* Tenuis rigidiuscula imbricata dimidiata v. flabelliformis regulariter sulcato-zonata scabroso-tomentosa umbrinella; hymenio e luteo-umbrino cinnamomeo; poris dentatis.

Pores $\frac{1}{48}$ inch in diameter. Allied to *H. sericea.*

171. Hexagona affinis, *B. Lond. Journ.* 1843, p. 4.

172. Favolus saccharinus, *B.* Pileo flabelliformi sessili subtiliter velutino glabrescente; poris sinuatis flexuosis.

Pileus ½–1 inch across, at first very minutely velvety so as to have a saccharine appearance; pores arranged in lines proceeding from a common base.

173. F. brasiliensis, *Fr. Ep.* p. 498.

174. Laschia longipes, *B.* Pileo tenui umbilicato pallide aurantiaco, margine lobato; stipite elongato sursum dilatatato fissili; poris brevibus angustis sinuatis radiantibus.

About 1 inch across; stem 2 inches high, not 1 line thick. Specimen bad, but very distinct.

175. Lenzites applanata, *Fr. Ep.* p. 404.

176. Dædalea indurata, *B,* Pileo albido, disco parvo affixo radiato-rugoso marginem versus zonato; hymenio ochroleuco; poris minutis sinuosis.

Pileus 1½ inch across, 1 long; pores $\frac{1}{60}$ inch in diameter. A very distinct species, of which there is a single specimen only.

177. Irpex maximus, *Mont. Syll.* p. 174.

178. Stereum lobatum, *Fr. Ep.* p. 547.

179. S. vespilloneum, *B.* Tenue flabelliforme vertice parvo orbiculari affixo; pileo badio rufo zonato velutino; hymenio badio, margine sterili pallido.

Pileus 2½–3 inches across, 2 long, then repeatedly zoned velvety with a few dark, nearly smooth interstices.

180. S. effusum, *B.* Pallidum margine inflexo lacerato-lobato, lineato pulverulento; hymenio lineato.

Pileus by confluence 3 inches wide. Pileus sometimes scarcely lineate, and then more pulverulent.

181. S. induratum, *B.* Durissimum conchiforme concentrice sulcatum velutinum; hymenio lævi subtiliter pulverulento, contextu rhabarbarino.

Pileus 3 inches across. Distinguished at once by its very hard thick substance from *S. ostreatum* and its allies.

182. Thelephora lamellata, *B. U.S. Exp. Exp.* tab. *Fungi*, fig. 7.

There is also a specimen in the collection from Taviuni given by Dr. Good, of H.M.S. 'Dido.'

183. Lachnocladium furcellatum, *Lév. Ann. Sc. Nat.* 1846, v. p. 159.

184. L. semivestitum, *B. & C. Grevillea, Not. N.-Am. Fungi*, no. 226.

185. Hirneola rufa, *B. Ann. Nat. Hist.* x. p. 384.

186. Peziza Hindsii, *B. Lond. Journ.* 1842, p. 456.

187. Xylaria piliceps, *B.* Clavula subturbinata coffeata rimosa molli fragili ostiolis subprominulis punctata; stipite gracili concolori laccato rimoso, contextu pallido.

Stem 1¼ inch high; head ½ inch high, ⅓ wide. I find no sporidia.

188. Hypoxylon concentricum, *Grev.* t. 324.

Ternate (Moluccas). Oct. 1874.

189. Polyporus (Placoderma) australis, *Fr.*, var. applanata. Pores not stratose. The soft dark substance of the pileus has harder strata intermixed.

190. Hexagona polygramma, *Mont. Syll.* p. 169.

A form with smaller pores $\frac{1}{45}$ inch in diameter instead of $\frac{1}{24}$.

191. Polyporus (Inodermei) russogramme, *B.* Umbone affixus spadiceo-rufus coriaceo-mollis rigescens; pileis imbricatis subzonatis radiato-lineatis, margine acutissimo tenui lacerato; poris irregularibus; dissepimentis acutis tenuibus dentatis flexuosis.

Pores $\frac{1}{214}$ inch in diameter.

Little Ké. Sept. 24.

192. P. (Pleuropus) sanguineus, *Fr.*

193. P. (Placodermei) Persoonii, *Fr.*—*Dædalea sanguinea*, Kl. *l. c.* p. 481.

194. Trametes occidentalis, *Fr.*

195. Hypoxylon vernicosum, *Fr. Summ.*

Camiguin, Malanipa, Malamon (Philippines).
Jan. 30–Feb. 4, 1875.

196. Lentinus Leveillei, *B. Tr. Linn. Soc.* xv. tab. 9. fig. 5.

Camiguin. Originally from Surinam.

197. L. abnormis, *B.* Gregarius cæspitosus; pileo tenui infundibuliformi hispidulo; margine tenui lobato; stipitibus elongatis luteis furfuraceis e basi orbiculari confluentibus, sursum dilatatis; lamellis angustissimis decurrentibus integris.

Pilei 1–2 inches across, stem 3 inches high, 1–2 lines thick, orbicular base $\frac{1}{3}$ inch.

Malamon.

198. L. exilis, *Kl.*; *Fr. Syn. Lent.* p. 10; *Ep.* p. 393. Pileus $2\frac{1}{2}$–3 inches across, deeply umbilicate, virgate, smooth, margin incurved, stem 1 inch high, ending abruptly as if there had been a trace of a ring, above which the space, which is really part of the pileus, is quite smooth and even, marked only with the trace of the gills, which are very narrow and decurrent, very minutely toothed and echinulato-glandulose. Malanipa.

199. Schizophyllum commune, *N.*

Malanipa, Camiguin.

200. Polyporus (Mesopus) xanthopus, *Fr.*

Malanipa, Malamon.

201. P. (Mesopus) grammocephalus, *B.*

Malamon.

202. P. (Pleuropus) affinis, *Nees.*

Malanipa, Malamon.

203. Polyporus (Pleuropus) lucidus, *Fr. Ep.* p. 442.
Malanipa.

204. P. (Pleuropus) gibbosus, *Nees*; *Fr. Ep.* p. 443.
Malanipa.

205. P. (Pleuropus) sanguineus, *Fr.*
Malamon, Camiguin.

206. P. (Anodermei) læticolor, *B.* Pileo dimidiato postice leviter decurrente armeniaco rugoso subtiliter velutino, margine tenui irregulariter lobato; contextu molli cinnabarino, primum armeniaco; hymenio cinnamomeo, margine ochroleuco; poris minutis acie acutis.

Pileus 3 inches wide, 2 long; pores $\frac{1}{72}$ in diameter. Looks at first like a thin state of *Polyporus ulnarius.*

Malamon.

207. P. (Anodermei) ostreæformis, *B.* Imbricatus albidus; pileo dimidiato tomentoso postice innato-fibroso rugoso, margine acuto; hymenio plano; poris angulatis, dissepimentis tenuibus acie integris.

Pilei $1\frac{1}{2}$ inch across, 1 long; pores $\frac{1}{120}$ inch in diameter, substance brittle, rigid when dry.

Malanipa.

208. P. (Placodermei) zonalis, *Fr.*
Malamon.

Var. semilaccatus. Pileo reniformi rigido postice laccato rufo decurrente, antice pallido zonato rugoso; hymenio pallido; poris punctiformibus; contextu pallido.

Pileus 3 inches across, 1 long; pores $\frac{1}{150}$.

Malamon. The species is extremely variable.

209. P. (Placodermei) caliginosus, *B.* Pileo tenui rigido sæpe longe decurrente zonato lineato-rugoso atrobrunneo; margine acuto crenato-lobato; contextu hymenioque ferrugineo; poris minutis.

Pileus 5–6 inches wide, $3\frac{1}{2}$ long; zones narrow, sometimes projecting in a scalariform manner, as if the growth were at times suddenly arrested; pores smaller than in *P. australis*, and not merely punctiform, stratose. In one specimen fixed by the vertex the pileus is still decurrent. Malamon.

210. P. (Placodermei) senex, *Mont.* Very old and cracked.
Malanipa.

211. P. (Placodermei) endotheius, *B.* Pileo ungulato fulvo

pulverulento-velutino; contextu duro sulphureo; hymenio pallide umbrino; poris punctiformibus.

Pileus 2 inches across, $1\frac{1}{2}$ long, 2 high. Malanipa.

Allied to *P. igniarius*. Pileus with two or three obtuse convex ridges.

212. Polyporus (Placodermei) igniarius. Malamon.

213. P. (Placodermei) pectinatus, *Klotzsch, l. c.* p. 485.

Apparently so old as not to show the rhubarb-coloured hymenium. In Klotzsch's original specimens, however, and also in that from Cuba, the old hymenium is brown.

Malamon.

214. P. (Inodermei) caperatus, *B. Ann. Nat. Hist.* x. p. 391. Malanipa.

215. Trametes conchatus, *B.* Pileo pallide umbrino-ochroleuco sulcato-zonato subtiliter tomentoso; contextu pallido sericeo; poris angulatis umbrinis.

Pileus nearly 6 inches across, 3 long; pores $\frac{1}{48}$ in diameter.

Allied to *T. lactineus*, B.; but the pores are wider and the dissepiments not so rigid and obtuse. They are evidently, when fresh, of a much softer consistence, so that they contract when dry.

Malanipa.

216. T. mollis, *Fr. Hym. Eur.* p. 585.

Malanipa.

217. T. occidentalis, *Fr.*

Malamon.

218. Hexagona crinigera, *Fr. Fung. Guin.* f. 10.

Pores $\frac{1}{12}$–$\frac{1}{6}$ inch in diameter. There is a variety with smaller pores quite devoid of bristles.

Malanipa, Malamon.

219. H. albida, *B.* Disco orbiculari affixa; pileo reniformi leviter sulcato-zonato ruguloso scabro, margine acuto; poris subflexuosis intus scabris pallidis.

Pileus $2\frac{1}{2}$ inch across, $1\frac{1}{2}$ long; pores $\frac{1}{16}$ in diameter.

Intermediate between *Hexagona* and *Dædalea*. Though the pores are flexuous, there is not the slightest tendency to radiate.

Malamon.

220. H. flabelliformis, *B.* Pileo tenui flabelliformi rufulo radiato-lineato subtiliter et sparsim velutino glabrescente; poris demum elongatis amplis setulosis.

Small but distinct. Pores $\frac{1}{18}$ inch in diameter.

221. H. cladophora, B. Pileo primum processibus molaribus rugoso, interstitiis bombycinis, demum læviore scabroso

rufulo, siccato contracto; poris demum elongatis dissepimentis obtusis.

Pileus $2\frac{1}{2}$ inch wide, 1 inch long; pores $\frac{1}{18}$ inch in diameter.

This is a very curious species, and may possibly be nearer allied to *Merulius*.

Malamon.

222. Favolus scaber, B., and var. platyporus, *Journ. Linn. Soc.* xiv. p. 57.

Malamon, Malanipa.

223. Lenzites applanata, *Fr.*

Little Ké.

224. Irpex zonatus, *B. Hook. Lond. Journ.* 1845, p. 168.

Malanipa.

225. Stereum ostrea, *Nees*; *Fr. El.* p. 175.

Malanipa.

226. S. Moselei, *B.* Pileo ex infundibuliformi flabellato subtiliter velutino subzonato cervino, margine pallidiore; stipite e basi parva oriundo opaco pallido; hymenio rufulo.

Pileus about $\frac{1}{2}$ an inch across; stem $\frac{1}{4}$ inch high; sometimes several spring from the same confluent base; stem occasionally of the same colour with the hymenium.

Malamon, upon sticks.

227. Hirneola rufa, *B.*

Little Ké.

228. Xylaria hypoxylon, *Grev. Fl. Ed.* p. 355.

A minute form with sporidia $\frac{1}{1000}$ inch in diameter.

Malanipa.

Admiralty Islands. March 1875.

229. Agaricus (Pleurotus) scabriusculus, *B.* Conchiformis postice depressus, pileo subtiliter pulverulento-tomentoso demum leviter radiato-plicato; stipite brevissimo laterali cylindrico quandoque applanato; lamellis decurrentibus nec postice porosis integris.

Pileus 1–2 inches wide, an inch or more long, soft and pliant, when dry, of an ochraceous tint.

230. A. (Pleurotus) lachnocephalus, *B.* Pileo excentrico tenui campanulato subtiliter velutino saccharino rufo umbilicato sulcato; stipite cylindrico pulverulento e basi orbiculari albo oriundo; lamellis latiusculis decurrentibus.

About $\frac{1}{3}$ inch across; stem $\frac{1}{4}$ inch high, not 1 line thick.

There is a form with a longer, less excentric stem, which has the appearance of a *Marasmius*.

231. Agaricus (Pleurotus) semisupinus, *B. & Br. Journ. Linn. Soc.* xi. p. 529.

232. Marasmius fulviceps, *B. Hook. Lond. Journ.* 1847, p. 490.

233. M. hispidulus, *B.* Pileo e convexo explanato fulvo hispido; stipite gracili deorsum albo-furfuraceo, sursum primitus subtiliter velutino brunneo; lamellis ventricosis adnatis.

Pileus 2–3 lines across; stems $\frac{1}{3}$–$\frac{1}{2}$ inch high.

There is also a barren *Marasmius* on *Trichomanes javanicus.*

234. Lentinus hygrometricus, *B.* Pileo infundibuliformi, subtiliter tomentoso lineato, margine exsiccato lobato inflexo; stipite gracili sursum dilatato furfuraceo glabrescente; lamellis angustissimis decurrentibus.

Scattered on blackened dead wood.

Pileus $\frac{3}{4}$ inch across when expanded; stem 1 inch high, not a line thick.

235. L. villosus, *Fr. Ep.* p. 388.

336. Polyporus (Mesopus) xanthopus, *Fr.*

237. P. (Pleuropus) affinis, *Nees.*

238. P. (Pleuropus) sanguineus, *Fr.*

239. P. (Mesopus) grammocephalus, *B.*

240. P. (Pleuropus) elegans, *Fr. Ep.* p. 440.

241. P. (Pleuropus) rasipes, *B.* Pileo flabelliformi conchato sericeo lineato subvelutino zonato rufo, exsiccato incurvo; stipite brevi applanato hispidulo; hymenio pallido; poris minutis angulatis, dissepimentis tenuibus.

Pileus $\frac{3}{4}$–1 inch across; stem $\frac{1}{4}$ inch high, dilated upwards; pores $\frac{1}{200}$ in diameter. Much contracted when dry. The short hairs on the stem sometimes pointing upwards.

242. P. (Pleuropus) stereinus, *B. & C. Linn. Soc. Journ.* x. p. 308.

243. P. (Placodermei) igniarius, *Fr.*

244. P. (Placodermei) australis, *Fr.*

245. P. (Placodermei) exotephrus, *B.* Durus; pileo sulcato-zonato, primitus subtiliter tomentoso glabrescente, margine sulcato prominulo obtuso lobato; contextu ligni colore; poris brunneo-ferrugineis minutis.

Pileus $2\frac{1}{4}$ inch wide.

Has somewhat the appearance of *P. caliginosus*, B.; but the flesh is pallid, not deeply ferruginous.

246. Polyporus (Placodermei) caliginosus, B.

247. P. (Placodermei) Persoonii, *Fr.*

248. Trametes occidentalis, *Fr.*

249. T. lactineus, *B.*

250. Hexagona affinis, *B.*

251. H. picta, *B.* Pileo dimidiato, postice sanguineo-rufo, antice pallido, lineato-ruguloso plicato, primum pulverulento; hymenio umbrino; poris hic illic margine undulatis.

Pileus 2½-3 inches wide, ¾ inch long; pores $\frac{1}{24}$.

252. Laschia tremellosa, *Fr.*

253. Stereum elegans, *Fr. Ep.* p. 545.

254. Thelephora lamellata, *B.*

255. Hirneola polytricha, *Mont.*

256. H. rufa, *B.*

257. Peziza Hindsii, *B.*

"The largest, very thin specimens, from the base of littoral trees, were constantly being bathed and often immersed in sea-water."

Japan[*]. April 28, 1875.

258. Agaricus (Armillaria) edodes, *B.* Pileo carnoso convexo fusco; stipite solido cylindrico e basi crassa orbiculari oriundo; annulo angusto; lamellis postice rotundatis.

Commonly eaten in Japan and exposed for sale in large quantities in the shops. Japanese name *Shi-taki.*

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[*] The following interesting Japanese species have been received from Mr F. V. Dickins:—

a. Agaricus (Pleuropus) guepiniiformis, *B.* Pileo spathulato fisso; strato superiore gelatinoso læticolori croceo; lamellis decurrentibus concoloribus.

About 1 inch long, ¾–1 inch wide.

b. Agaricus (Pleuropus) subfunereus, *B.* Pileo spathulato palumbino glabro e stipite candido cylindraceo ramoso oriundo; lamellis tenuibus integris lineato-decurrentibus pallidis.

Pileus ½–¾ inch wide, 1 inch long; stem ½ inch high, 1 line thick.

c. Cantharellus flabellatus, *B.* Pileo flabelliformi, postice elongato, attenuato, radiato-rugoso, tenui; lamellis angustis dichotomis sinuatis.

Pileus 1½ inch across, 2½ long, the attenuated stem-like base sometimes branched.

d. Polyporus (Pleuropus) vernicipes, *B.* Pileo tenui conchiformi pallido zonato crenato subplicato radiato-striatulo zonis umbrinis picto; stipite brevissimo polito poris albis.

Pileus 1½ inch wide, 1 long; pores $\frac{1}{100}$ inch in diameter.

e. P. (Pleuropus) Dickinsii, *B.* Pileo tenui papyraceo spathulato, basi sti-

259. A. (Flammula) micromegas, *B.* Pusillus, pileo e convexo depresso glaberrimo fulvo; stipite tenui obscuriore; lamellis umbrinis ventricosis adnexis vel leviter adnatis.

On decayed wood.

The dried specimens have a very rigid appearance, so as to resemble at first sight some small *Polyporus.*

Pileus $\frac{1}{3}$ inch across; stem $\frac{1}{2}$ inch high.

260. Polyporus (Pleuropus) rufescens, *Fr.* A resupinate form.

261. P. (Anodermei) adustus, *Fr. Syst. Myc.* p. 456.

262. P. (Placodermei) portentosus, *B.*

263. P. (Inodermei) subpellucidus, *B.* Imbricatus; pileis tenuibus lobatis sericeo-hirsutis leviter zonatis; hymenio e pallido brunneolo; poris parvis dentatis, dissepimentis cartilagineis.

Pileus $\frac{1}{45}$ inch in diameter.

Attached to the delicate stems of some climbing herb, densely imbricated.

264. Polyporus (Inodermei) elongatus, *B. Hook. Lond. Journ.* 1842, p. 149.

265. P. (Inodermei) versicolor, *Fr.*

266. Dædalea unicolor, *Fr.*

267. Irpex consors, *B.* Imbricato-reflexus; pileis pulverulento-tomentosis mox glabrescentibus leviter zonatis; dentibus compressis umbrinis apice candidis.

Spreading for several inches, and then putting out either at the edges or from the hymenium a multitude of imbricated pilei, which are at first slightly tomentose, but then smooth with one or two zones; teeth umber, compressed, pallid at the tips.

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pitiformi angustato, subtiliter tomentoso glabrescente, hic illic fisso, poris amplis brevibus sinuatis decurrentibus, margine inflexo.

Pileus dirty white, $2\frac{1}{2}$ inches wide, 3 inches long; pores $\frac{1}{18}$ in diameter.

f. P. (Inodermei) pocas, *B.* Pileo reniformi, vertice affixo, leviter zonato, villis radiantibus ornato, postice leviter decurrente, margine tenui ochroleuco acuto sterili; hymenio pallido, postice cinerascente; poris punctiformibus acie obtusissimis.

Pileus $2\frac{1}{2}$ inches long, 1 inch wide. Resembles externally *P. vellereus*, B.; but the pores are very different.

g. Hydnum olidum, *B.* Stipite brevi centrali impolito; pileo zonato floccis lineari-fasciculatis squamoso cinerascente; aculeis elongatis sporisque pallidis.

Pileus 2 inches across; stem collecting leaves by means of its floccose surface; mycelium delicate. Colour at first apparently greenish, but dark cinereous when old. Smell strong, like that of melilot. Agreeing with *H. graveolens* in its smell and dirty-white spores.

268. Stereum contrarium, *B.* Rigidum conchiforme; pileo nigro zonato hispido, hic illic glabrescente, margine pallido, hymenio candido revivescente.

269. Puccinia corticioides, *B.* & *Br.* Soris confluentibus armeniacis; sporis pellucidis subellipticis, centro demum contractis; pedicellis longissimis. (Pl. II. figs. 7, 8.)

On the stems of some large Graminea, probably *Arundinaria*. Kobê, Nippon. At first appearing under the form of little tawny specks; at length forming apricot-coloured patches, which assume the form of some *Corticium*; pedicels ·007–·008 inch long; spores ·0008–·001 long, globose when young. The specimens do not give sufficient information to trace the whole life-history of certainly the most curious species of the genus.

270. Uromyces deformans, *B. & Br.* In apicibus disciformibus pedunculorum situs; peridio operculiformi; sporis obovatis, margine striatis, albis. (Pl. II. figs. 1–6.)

On the disciform tips of the branchlets of "broussins" in *Thuja dolabrata*. Hakone. Peridium operculiform, shining, pale fawn-coloured; spores springing from a reticulated mass on distinct pedicels, obovate, with a striated border, ·0015–·002 inch long. Curious as this fungus is, there does not seem to be any character by which it can safely be separated from *Uromyces*. The processes on which the *Uromyces* is developed seem rather to be transformations of branchlets than multiplication of fruit-stalks.

271. Ustilago carbo, *Tul.*

Whole crops were often seen affected with the *Ustilago* on a journey along the Tokaido from Kioto to Yokohama, May 1–10.

Tahiti. Sept. 24, 1875.

272. Polyporus (Pleuropus) lucidus, *Fr.*

273. P. (Resupinati) benetostus, *B.* Late effusus, subtus margineque albidus; hymenio spadiceo areolato-fisso; poris minutis.

Widely effused, three or four inches across, at first orbicular, dirty white, with a membranous not byssoid margin. Hymenium the colour of lightly toasted bread, cracked into distinct fascicles of tubes after the manner of *Radulum quercinum*; pores about $\frac{1}{120}$ inch in diameter.

274. Hirneola polytricha, *Mont.* Feb. 1876.

Juan Fernandez. Nov. 13–15, 1875.

275. Xerotus tener, *B. & Br. Journ. Linn. Soc.* xiv. p. 45.

276. Xerotus Bertierii, *Mont. Syll.* p. 151.

277. Polyporus (Anodermei) adustus, *Fr.*

278. P. (Placodermei) australis, *Fr.*

279. P. (Placodermei) scansilis, *B.* Levis, pileo pulvinato brunneo repetite profunde sulcato-costato coffeato; cuticula tenui rigida; contextu crasso candido fibroso in poros brunneos punctiformes desinente.

Several inches across, attached behind; pileus with prominent ridges all round. The light white substance consists of vertical fibres, which end in the deep umber tubes, whose orifices are punctiform with flat interstices.

280. P. (Inodermei) hirsutus, *Fr. Ep.* p. 477.

Some of the specimens are very thick and rigid, sometimes nearly smooth, and if there were no intermediate forms might be considered distinct.

281. Merulius corium, *Fr. El.* p. 55.

282. Cora pavonia, *Fr. Ep.* p. 556.

Addendum.

The subjoined fungi have nothing to do with the 'Challenger' collection; but they are inserted here as gathered in an island situated in nearly the same latitude as one visited by the Expedition.

Lord Howe's Island.

Fungi communicated by J. P. Fullager.

α. Schizophyllum commune, *Fr.*

On decayed Palm-stems.

β. Hirneola polytricha, *Mont.*

γ. Polyporus (Pleuropus) flabelliformis, *Klotzsch in Linn.* viii. p. 483.

δ. P. (Pleuropus) sanguineus, *Fr.*

ε. P. (Inodermei) aratus, *B.* Luteo-olivaceus; pileo dimidiato subimbricato flexili concentrice sulcato nitido glabrato; margine tenuissimo, subtus sterili; contextu concolori; poris parvis rigidiusculis saturatioribus.

Pileus $3\frac{1}{2}$–4 inches wide, 3 inches long, smooth and shining when fully developed, flexible; pores subhexagonal, about $\frac{1}{72}$ inch in diameter. I have a *Polyporus* from Brisbane communicated by

Mr. Broome (*P. luteo-olivaceus*, B. & Br.), which at first sight looks very like this; but instead of being flexible it is hard and coriaceous, while the pores, which are smaller, are deep umber and punctiform.

ζ. P. (Placodermei) Fullageri, *B.* Durissimus; pileo pulvinato, postice nigrescenti-brunneo, antice subtiliter velutino rhabarbarino rugoso parce sulcato; vertice elongato; contextu fulvo; poris minutissimis.

Pileus $3\frac{1}{4}$ inches wide, $1\frac{3}{4}$ long, $1\frac{1}{2}$ high, with elongated vertex; pores $\frac{1}{180}$ inch in diameter. Very hard, cracked behind with two or three concentric grooves.

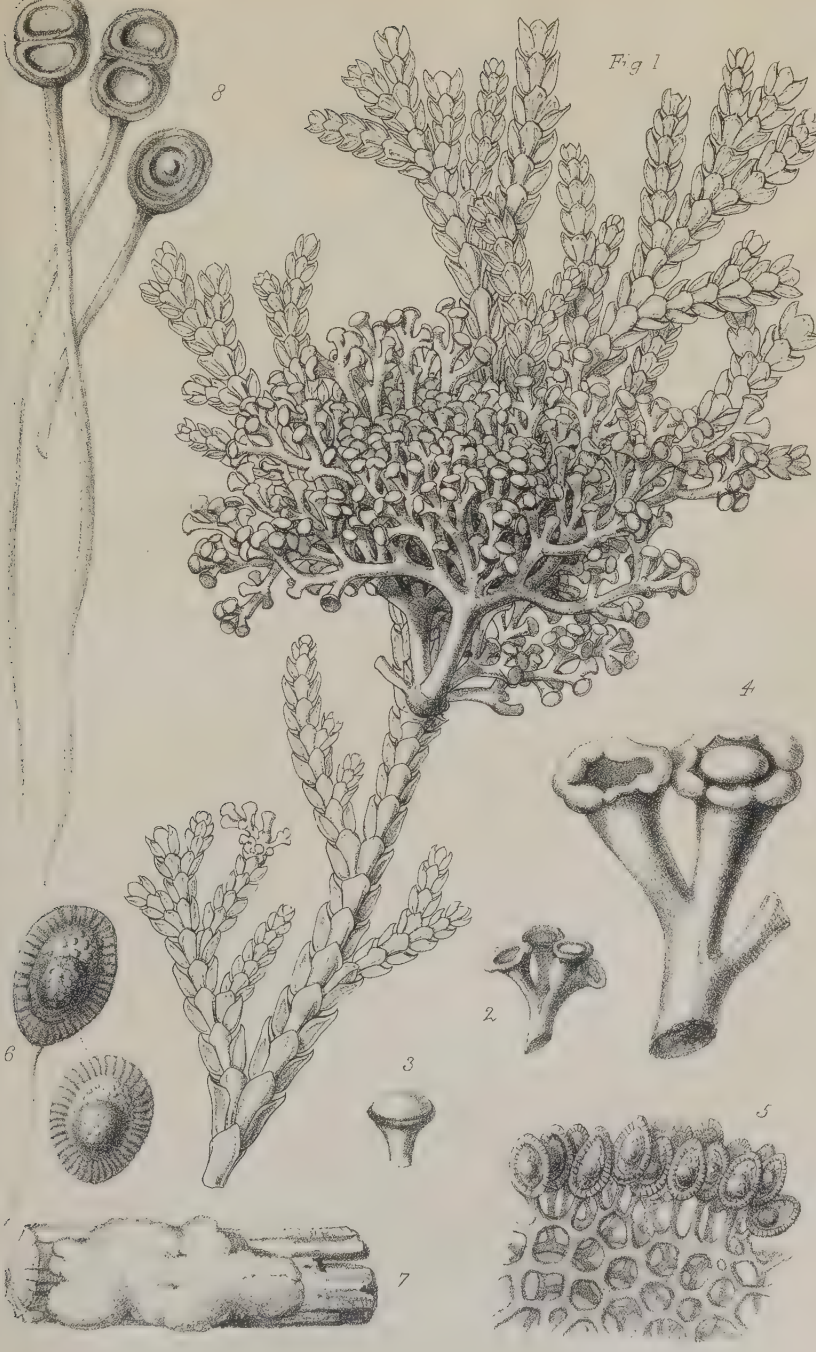
η. Hexagona rigida, *B.* Dimidiata, postice decurrens, rigida; pileo umbrino concentrice zonato-sulcato radiato ruguloso glabrescente; margine sulcisque elevatis subtiliter tomentosis; hymenio pallido; poris magnis.

Pileus 3 inches wide, or 6 by confluence, 2 long; pores $\frac{1}{12}$–$\frac{1}{16}$ in diameter. When fully developed quite smooth, cream-coloured within. There is a variety with slightly narrower pores and lobed margin; also a bleached state just intermediate.

DESCRIPTION OF PLATE II.

Fig. 1. Sketch of a spray of *Thuja dolabrata*, with the *Uromyces deformans*, B. & Br., *in situ*. Drawn from a specimen in the Kew Herbarium, and of the natural dimensions.

2. Branchlets from which the *Uromyces* has fallen, but enlarged.
3. One with the peridium perfect; still more enlarged.
4. Branchlets with and without fungus; very considerably magnified.
5. A view of the spores *in situ*; also highly magnified.
6. Two separated spores, still further enlarged. Spores ·0015, ·002 inch long.
7. *Puccinia corticioides*, B. & Br., the plant; of natural size.
8. Spores of the same, greatly magnified. The heads of spores ·0008 to ·001 inch long, globose when young; stalks ·007 to ·008 inch long.



J.N. Fitch, lith.

1-6. UROMYCES DEFORMANS, 7-8 PUCCINIA CORTICIOIDES.

Fitch, imp.

On the Nature and Mode of Use of the Vegetable Poisons employed by the Samoan Islanders. By the Rev. THOMAS POWELL, F.L.S.

[Read March 15, 1877.]

THE death of that great and good man the late Commodore Goodenough, from the poisoned arrows of the people of Santa, having invested those deadly weapons with so peculiar an interest, I am sure no apology will be required for my presenting to the Linnean Society at one of its Meetings the following particulars upon the subject of poisoned spears and arrows.

I have in the mission establishment here a native of Efat, (Sandwich Island) in the New Hebrides. He is the son of the late chief of the village of Erakor, whose name was Torlie, and who, under the influence of our Samoan evangelists, embraced Christianity in 1845. He then adopted the name of Pomare. This son of his, who is about 35 years of age, obtained from him the following particulars upon the above subject.

Poisoned Spears and Arrows.

The Preparation of the Points.—This, together with the preparation of the poison, was a regular business, and practised only by the initiated. They were distinguished by constantly wearing the *os femoris of a pig* inserted between the arm and the armlet.

When these men heard of any person suffering from some very acute disease indicated by excessive delirium, they watched for his death and then noted the place of his burial. After the lapse of five or six months they would stealthily open his grave and carry thence the large bones of both extremities and the parietal bones of the skull. Of these they made the points of the spears and arrows. Of the femoral bones alone were made the points of the spears. These were prepared by sawing off the upper part below the processes separating the outer condyle, and rubbing down the inner one to a fine point. A wooden handle was then inserted into the upper end and securely fastened with the bark of a twining plant coated with some gummy substance which made it imperishable.

The other bones were sawn into small pieces from an inch to two inches long, and then rubbed down on stones to a very fine point. On account of the convexity of the parietal bones, the points made of them were often very short, in order to have them perfectly straight. These, however, were considered the choicest.

For a saw they used the spines of the large *Echinus*. To make these answer this purpose, two sharp edges were formed on each by rubbing it on stones. Each spine, therefore, was equal to two saws. A goodly number of these were needed, as they soon became dull.

The points, when finished, were inserted into a cane shaft made of a species probably of *Joinvillea*, aad fastened in the same way as the spear-points. They were then ready for the application of the poison.

Preparation of the Poison.—In this preparation a great number of poisonous plants were used—different plants by different persons. Three, however, were used in common.

1. The most virulent of all is called on Efat NA TOTO; *na* is the article, *toto* the noun. This is a large tree, which my informant compares to a *Calophyllum Inophyllum*. Inflorescence abundant, white. Fruit a drupe, about the size of an almond, dark red when ripe, attached to a long peduncle. Every part of the tree is a virulent poison. When cut, a white milk exudes from it, which causes blindness when brought into contact with the eyes. Its sap, when introduced into the circulation,. causes death. Of both these effects my informant gave me a memorable illustration, of which his own mother was an eye-witness. She was a Samoan, and one of a party who, with a number of Tongans, were drifted from Samoa in a double canoe to the New Hebrides about fifty years ago. They landed on the western end of Efat and acted the part of freebooters. Again embarking, they proceeded eastward, calling at several villages and acting in the same way, intending finally to make their way back to Samoa. At a place called Mole, near Eraker, the people, expecting a visit from these depredators, prepared for them in a way which they little suspected. They had, as is common in similar places, an enclosure of water on the beach which at low tide served both for drinking and bathing. They pounded a quantity of the leaves of the TOTO previously dried in an oven; and when they saw the canoe coming they threw these pounded leaves into the bathing-place. As soon as the canoe anchored, most of the crew, after native fashion, rushed to the fresh water to drink and to bathe. They were immediately thrown into convulsive agonies: those who only bathed became blind; and those who drank died. The survivors settled

down in the neighbourhood; and, as above intimated, one of the women became the wife of Tahi and mother of my informant, from whom he received this account. The original party numbered about fifty; in 1845, when the mission-ship first visited the island, only *nine* were left.

But to resume. The tree grows near the sea-beach. It is very tenacious of life; for when cut down, shoots soon spring up from the roots. It is probably common in the New Hebrides; my informant had noticed it growing on Aneiteum.

So closely does this description agree in many respects with that given by the late Dr. Seemann, 'Flora Vitiensis,' p. 233, of the *Sinu gaga* of Fiji, *Excæcaria agallocha*, Linn., that it seems highly probable that the TOTO of Efat is identical with it, or is a closely allied species.

2. NA SUAFA is the name of the second of the plants referred to above. Being told that this plant is found in Samoa also, I sent the man for a specimen. It proved to be the PUTU of Samoa, which Professor Oliver has identified as *Tabernæmontana orientalis*, R. Br.

3. NA SOLA. This is the *Fanuamamala* of Samoa, a species of *Carumbium*; but since we have, according to Baron von Mueller, probably three of these, viz. *C. pedicellatum, populifolium*, and *acuminatum*, I cannot say with which the Efat species agrees. They are all, however, considered by the Samoans to possess poisonous qualities, yet to be useful in some diseases.

The leaves of these three plants were carefully picked, the stems and points were nipped off, and they were put into a shed to dry. When quite dry, they were taken in equal parts and reduced to a fine powder in a wooden mortar with a pestle made of the *ara* wood,—that is, the *toa* of the eastern Polynesians (*Casuarina equisetifolia*). To this powder was added a portion, in quantity equal to that of each of the leaves, of very fine scrapings of an old piece of *ara*. The whole was then well rubbed together in the mortar.

The next ingredient was from the animal kingdom. A very long species of *Holothuria*, called in Samoa the *pewa*, being probably *H. vittata*, was brought from the lagoon; the sea-water and the sand were emptied out, and it was exposed to the sun sufficiently long for all the water that remained in its substance to evaporate. It was then put into a leaf of *Calocasia Indica* and placed in the shade till it became a putrid liquid. The bowl having been previously lined with a leaf of the *Calocasia* in order to prevent adhesion to its sides, the powder was again put into it and the liquid added in quantity sufficient to form a thin paste, which was then well stirred with a stick or brush prepared for the purpose.

There was still one more ingredient considered necessary to render the poison sufficiently virulent. In the woods, in the neighbourhood of wasp-nests, were accumulated on the branches of trees small mosses of what the natives considered the wasps' food. It had the appearance of dried earth, and was probably merely accumulations of material for building-purposes. It was called NA LET(=*layt*), which was the name also of the wasp, as in Samoa a species of white ant and its nest are both called *ane.* This substance, "the food of the lēt," was collected, and a quantity, equal to that of each of the other ingredients, rubbed to a very fine powder in a separate mortar kept for the purpose. The os femoris, the badge of office already referred to, was used as a pestle.

This wasp-earth was considered by the natives the most active of the ingredients, since when convulsions and lock-jaw ensued from the poison, they would say of the person so affected "*Na puatia na lēt*"—that is, "he is seized by the *layt.*"

This fine powder was added to the mixture, stirred in; and the whole was then exposed for a while to the sun in order to evaporate any remaining humidity. To this mixture some were in the habit of adding the juices of various other poisonous plants; but these were not considered absolutely necessary.

The next step was to grate down the flesh of an old cocoa-nut and wring out the milky oily juice, which was added in proper proportion to the mixture. The mass was then stirred frequently for about a month, till it became a cloudy dark oil. It was then put into gourd bottles, which were suspended to the roof of the house. In about twelve months it became consolidated to the consistence of lard and was considered fit for use.

From this account, then, we obtain the following formula for the preparation of

The Poison for Spears and Arrows.

Take, in equal parts, of

the leaves of { *Excæcaria Agallocha,*
Tabernæmontana orientalis,
Carumbium pedicellatum?

The fine dust of an old piece of *Casuarina equisetifolia.*
Finely powdered dust of accumulations formed by a species of wasp.
To be well rubbed together.

Add the putrid liquid of *Holothuria vittata*, sufficient to form a thin paste, and evaporate all humidity. Add the expressed juice of an old cocoa-nut; stir frequently for about a month till the mass becomes a dark cloudy oil; bottle and preserve for twelve months, when it will be fit for use.

Application of the Poison to the Points of the Spears and Arrows.—When about to apply the poison to the points a kind of kiln was prepared for smoking them. One hole was made in the ground in a slanting direction, and another perpendicularly to serve as a chimney. In the slanting one was made a fire of the *Casuarina* wood. The spears and arrows already prepared were placed ready at hand. A bottle of the poison was taken down, and a small portion taken out on the point of a stick; this was carefully rubbed on the bone point of the spear or arrow, which was then held over the smoke ascending from the chimney. Having been well smoked, it was carefully placed upon a rack over the common fire-place. A large number were prepared in this way at one time.

When well dried, the point of each arrow was carefully inserted into a dried flower-stalk of *Tacca pinnatifida*; and thus prepared and protected, the arrows were tied in bundles and placed in a quiver formed of one of the cylindrical layers of the trunk of the Banana, and again hung up over the fire-place to keep them dry. They were thus ready for use or for sale whenever needed. It will be observed that from first to last great care was used to exclude humidity. The reason of this may be that humidity destroys the virulence of the poison; and hence the comparative harmlessness of the poison of such arrows as have been obtained as specimens by gentlemen of war-vessels and others.

The points of the spears were carefully preserved from injury in the spathe of the Mountain Plantain (*Musa troglodytarum*, Linn.).

Effects of the Poison and the Means of Cure.—The poison, when taken internally, was always fatal. Hence occasionally a woman when determined to get rid of a hated husband, would scrape off the poison from the point of an arrow, put it in her husband's food, and thus surely effect her purpose. And however much she might feign grief, the symptoms of the sufferer would at once proclaim the cause and the author of his agonies and death; for men never resorted to such means of revenge.

When introduced into the system on the points of spears or arrows, the effects were often diversified. In some instances the local pain would be very severe, followed by general disturbance of the system in two or three days, and ending in convulsions, lock-jaw, and death. If the incisions were in such cases made at an early stage, the patient might recover.

In other instances the effects were more gradual and insidious, causing at first but little local or constitutional disturbance, but gradually inducing fever, convulsions, lock-jaw, and death. The tetanus was one symptom of every fatal case.

There were men who professed a knowledge of antidotes to the poison. When called to a patient, their first care was to guard against every thing which might startle him, as a very slight shock would induce convulsions and lock-jaw, and render the case hopeless. The antidotes were kept a secret by the craft; but Pomare, who had often been wounded, assured his son that his conviction was that he had been saved, not by these antidotes, but by making free incisions in different parts of his body, so as to allow the escape of the poisoned blood.

Upolu, Samoa, Oct. 1, 1876.

Systema Iridacearum. By J. G. Baker, Esq., F.L.S.

[Read December 7, 1876.]

One of our greatest wants at the present time in every-day herbarium-work is a key to the genera of Iridaceæ, and a means of ready access to the great mass of scattered Iridaceous figures and literature. We now know in the order about seven hundred species and between sixty and seventy well-marked genera. Nearly all the Iridaceæ inhabit temperate regions, and may be grown successfully in the open air in this country. The order includes several of our most familiar garden genera, as, for instance, *Gladiolus*, *Crocus*, and *Iris*. How it comes that such an order has been so much neglected by systematists, I have never been able to understand. It was one of the few orders of Monocotyledons that were not treated in Kunth's 'Enumeratio;' and leaving out of count Dr. Klatt's papers, which are scattered through several volumes of the 'Linnæa,' for the latest continuous synopsis of the order we must go back to Dietrich's 'Synopsis Plantarum,' published in 1839, and this a mere compilation from other books.

During the first thirty, or perhaps we may fairly say forty, years of the century the order was energetically studied in this country. The principal worker in the field was Gawler, who afterwards changed his name to Bellenden Ker, left England a generation ago, and died at Nice within the last few years. He published, in 1805, in the first volume of König and Sims's 'Annals of Botany,' a paper containing a complete synopsis of genera, with a list of all the species then known. In this paper many of the genera as now admitted were for the first time named and fully characterized. For many years, during the editorship of Dr. Sims, he contributed largely to the 'Botanical Magazine,' and during that time gave figures and descriptions of a large proportion of the Irids then in cultivation, a number many times greater than we possess at the present day. In 1827 he published separately at Brussels a paper entitled 'Genera Iridearum,' in which he gives a synonymic list of all the species then known, and a full description of the thirty genera under which he classifies them.

What I am aiming at in the present paper is to do for 1876 what Ker did for 1827. We now know nearly 700 species, against a little over 300 with which he was acquainted; and I admit 65 genera against his 30. Salisbury studied the order very carefully, and in the first volume of the 'Transactions of the Horticultural Society' gave names to several genera that now stand; but he never characterized them, and his fragmentary 'Genera Plantarum,' issued a few years ago by Dr. J. E. Gray, stops short abruptly at the very beginning of the order. Dean Herbert made a special study of *Crocus*, and published a good many new species and genera of Iridaceæ in the 'Botanical Magazine' and 'Botanical Register.' For the last generation the order has been neglected, and many of the less hardy Cape species which were introduced in the days of Ker and Salisbury have been lost from cultivation.

The only considerable contribution to its literature during the last thirty years is a series of papers by Dr. F. W. Klatt, of Hamburg, which extend from the 31st to the 35th volume of the 'Linnæa.' These, taken together, constitute a general synopsis of the order. They are founded principally upon the Berlin Herbarium; and of the plants for which the author had access to proper material the descriptions are full and clear. But he gives no citation of synonyms; so that if we want to look up the references to any particular plant, these papers do not help us, and we have to fall back upon Ker's work of 1827. And not only has Dr. Klatt omitted many species which were known at the date when he wrote, but he has left, I think, great room for improvement in the making of a key to the genera and their general arrangement and nomenclature.

What I propose therefore to undertake now is to give, in the first place, a description of the genera, referring, of course, to their proper places, so far as I can judge, the numerous generic synonyms which by this time have accumulated, and constructing a general key to the tribes and genera upon the model of those which have been found so practically useful in Bentham and Hooker's 'Genera Plantarum,' and, secondly, to give under each genus a synonymic list of the known species with a brief note of their geographical distribution. The general plan of my paper is, as I said before, to do for the order in 1876 what Ker did in 1827. I have added to the scope of Ker's plan only by giving the preliminary key to the tribes and genera, and by including the geographical element. On the other hand, I have worked upon a materially smaller scale as regards synonyms, because, except in the case of figures, I have only cited the original authority for each name, and have omitted all reference to pre-Linnean books.

Without at all attempting to trace in detail the range of character which the different organs present, it will make matters more clear if I say a few preliminary words under each as to the characters for tribes and genera which they furnish.

Rootstock and Root.—In respect of rootstock, just as in Liliaceæ, the order falls into two unequal halves—a bulbous, and a non-bulbous series: there are 48 genera of the former, 17 of the latter. As a general rule, the non-bulbous differ tangibly from the bulbous genera in floral characters; but this is not invariably the case. For instance, the bulbous *Geissorhiza* answers perfectly to the non-bulbous *Schizostylis*, the bulbous *Xiphion* to the non-bulbous *Iris*. In each series we have a wide range of variation in root-character, so that in fact we get within the bounds of the order nearly every type of Monocotyledonous root and rootstock represented. In many species of *Sisyrinchium* we see a dense tuft of slender adventitious root-fibres without any rootstock, as in the ordinary grass type. In *Sisyrinchium graminifolium* and *pachyrhizum* these fibres become fleshy and cylindrical. The short-creeping, thick, firm rhizome of the ordinary *Irises* is familiar to every one. In *I. arenaria* this becomes a slender wide-creeping rhizome similar to that of *Carex arenaria*. The typical tunicated bulb is very common. In *Crocus* and *Moræa* corms with tunics of various texture are abundantly represented. In *Ferraria* we have a large irregularly shaped tuber like that of *Eriospermum*. The character of the bulb- or corm-tunics sometimes runs through a genus with great uniformity, and sometimes, as in *Crocus*, varies greatly in closely allied species, and furnishes one of the best specific characters. Nearly all the non-bulbous Irids are perennials; but we have an instance of an annual fibrous-rooted species in *Sisyrinchium micranthum*, which is one of the few plants of the order which have become naturalized far away from their original home.

Stem.—Three small Cape genera (*Witsenia* and its neighbours) are decided shrubs with acutely-angled stems, densely clothed up to the inflorescence with distichous, amplexicaul, linear leaves. All the other genera are herbaceous; *Crocus*, *Galaxia*, and *Sy-*

ringodea are acaulescent, with a very short underground scape. The habit so common in Liliaceæ and Amaryllidaceæ, leaves all congested in a basal rosette, and a produced, naked scape supporting the inflorescence, is rare here. The common type is a produced, terete or acutely-angled stem with a few, more or less reduced leaves intervening between the base and the inflorescence. In *Sisyrinchium* the difference between a terete and flat stem separates a large and difficult genus into two unequal halves. In *Marica* the stem is not merely flat, but as broad as the leaves and quite leaf-like in appearance, and produced unaltered beyond the single lateral cluster or corymb.

Leaf.—The leaves of Iridaceæ are always either membranous or coriaceous in texture, never fleshy; so that in appearance and persistence they are more like those of Cyperaceæ than the other two great bulbous orders. Very few Irids are destitute of produced leaves, or have the leaves developed at a different time to the flower. To the first, *Bobartia aphylla*, to the second, *Crocus nudiflorus* and *speciosus* are exceptions. The common type in the order of leaf-form and arrangement, a distichous basal rosette of linear or ensiform leaves so compressed that they clasp one another by their inner edges at the lower part, occurs abundantly, in company with all the leading types of perianth-structure, for instance, alike in *Ixia*, *Iris*, and *Gladiolus*. Narrow, deeply channelled, multifarious leaves in a dense basal rosette run uniformly through some genera, as *Crocus* and *Romulea*. Next to the distichous-flabellate, the most striking type in the order is the flat strongly plicate leaf, usually narrowed, either symmetrically or obliquely, into a sort of petiole, a type which nearly always runs without exception through the genera in which it occurs, and is represented at the Cape by *Babiana*, and in Tropical America by *Tigridia*, *Eleutherine*, and several other small genera. There are bulbilli developed on the axils of the leaves in species of *Sparaxis*, *Hesperantha*, and *Moræa*.

Inflorescence and Bracts.—Iridaceæ also agree with Cyperaceæ and Gramineæ, and differ from Liliaceæ and Amaryllidaceæ, in the fact that in inflorescence and bracts we get some of the best characters for groups and genera. Here, as in the structure of the perianth, we have in the order three well-marked types, viz.:—

1. Spathe essentially one-flowered and two-valved. Flowers

comparatively persistent, nearly always arranged in centripetal spikes, which are often panicled. To the normal form of this type, of which we have examples in *Gladiolus*, *Ixia*, *Watsonia*, *Sparaxis*, and *Antholyza*, about one third of the genera of the order belong. We have this type running into abnormal forms in *Lapeyrousia*, in which the flowers are arranged in corymbose panicles, but in some species they run into spikes at the end of the branches—and in *Romulea* and *Spatalanthus*, in which the flowers are often solitary or, if more than one, umbellate. Taking the three primary subdivisions of the order founded on perianth-structure, we find this type of inflorescence runs through all the *Gladioleæ*, includes about half of the *Ixieæ*, and is not represented at all in the *Irideæ* proper. It is correlated with flabellate-distichous leaves, the absence of a peduncle inside the bract, the presence of a distinct tube to the perianth above the ovary, a perigynous insertion of the stamens, and a comparatively firm texture and long duration in the flower. In this type the shape and texture of the two bracts of the spathe vary greatly from genus to genus, and usually run through a genus with great uniformity. As illustrations of peculiar forms, I may mention the short, oblong-truncate type, membranous in texture, with two or three cusps at the tip, which marks *Ixia*, *Morphixia*, and *Tritonia*, and the membranous lacerated spathe-valve conspicuously variegated with brown and white, which marks at a glance *Sparaxis* from all the other Ixioid, and *Synnottia* from all the other Gladioloid genera.

2. Flowers one or many to each bulb or corm, sessile in the centre of a multifarious rosette of generally narrow leaves, each furnished with a tight-clasping, long, membranous spathe of its own, divided at the top into one or two valves, and these, if the flower be more than one, not enclosed in a general bract of firm texture, as in the next group: examples—*Crocus*, *Galaxia*, *Syringodea*. The flowers in this type are always regular and upright, with a long slender tube, and the leaves never flabellato-distichous.

3. Flowers essentially clustered, the bracts superposed, the two outer ones generally green and firm in texture at the flowering-time, the inner ones membranous. The number of flowers in a cluster varies greatly. Rarely, as in some of the Irises, it runs down to one, in which case there are no membranous bracts inside the two outer green ones. Often the number

of flowers in a cluster is from three to six, as in *Tigridia* and *Rigidella*; but sometimes, as in *Aristea* and *Libertia cærulescens*, it runs up to twenty or thirty. The clusters are sometimes solitary, and in that case may either be terminal or lateral as regards the main axis of the stem. If more than one, they usually form corymbs, but sometimes, as in one section of *Sisyrinchium*, only a compound spike. Taking the divisions of the order as founded on perianth-structure, this type includes all the *Irideæ* proper, about half the *Ixieæ*, but none of the *Gladioleæ*—as a whole, more than half the genera of the order. The flowers are more fugitive than in the solitary-flowered, spicate type, and usually stalked within the spathe-valves; and the flowers in a cluster expand in succession, beginning with the lowest, the pedicels elongating so as to push up the limb above the level of the cluster of bracts. The limb often expands only for a few hours in the middle of the day, and, after once closing, does not open again. We have examples of this type of inflorescence, in the Old World, in *Iris*, *Patersonia*, and *Aristea*; and all the American genera, such as *Sisyrinchium*, *Marica*, *Tigridia*, and *Cypella*, belong to it exclusively. As the outermost flower is the first to expand, it would seem at first sight as if these clusters of flowers represented one of the Gladioloid spikes congested; but Mr. Bentham has lately pointed out ('Flora Australiensis,' vol. vi. p. 399) that they really represent congested, unilateral cymes—the pedicel of the first flower being not in the axis of the first bract, but opposed to the second bract with the rest of the cluster between them, the third bract placed on the same side as the first with the second flower opposed to it, and so on to the end. That such is the case it is often easy to see in *Iris*; but frequently the clusters are so excessively congested that it is difficult to make out their true character. With this type is correlated either a long, clavate ovary, or the presence of a pedicel inside the bract; and it is to this that the epigynous stamens, ovaries protruded at the top from the perianth-tube, and (except in *Babiana*) the plicate leaves are restricted; and in this type there is much less variation in the form and texture of the bracts that, under the centripetal spicate type and special forms of bract, are not characteristic of particular genera.

Perianth.—We get within the bounds of the order three distinct types of structure, viz.:—

1. A regular perianth, with a straight tube and symmetrical

limb, in which all the six divisions are alike in shape and direction, correlated with symmetrical stamens spreading from the axis in the same direction as the perianth-segments which they subtend—as in *Crocus* and *Ixia.*

2. A regular perianth with stamens as in the last type, but the three inner segments decidedly different in shape, and often in direction, from the three outer—as in *Iris* and *Tigridia.*

3. An irregular perianth with a more or less decidedly arching tube and segments of the same row different in shape and direction, correlated with stamens unilateral and arching in the expanded flower—as in *Gladiolus* and *Montbretia.*

This difference in perianth-structure furnishes, in my view, the best primary subdivision of the order for systematic purposes. It is a difference which is both important from a structural point of view and easy of application; and there is the advantage that each of the three groups thus formed contains a considerable number of genera. Out of 65 genera in the order, 32 belong to the first, 20 to the second, and 12 to the third type. The principal difficulty in its practical application is, that, if we look at perianth-structure alone, it is difficult to draw the line between the first group and the third; but if the direction of the stamens be attended to, the difficulty almost entirely disappears. As I have already indicated, these three types of perianth-structure, to a large extent, run parallel with the three types of inflorescence. All the 12 Gladioloid genera have the spicate, centripetal inflorescence; all the 20 Euiroid genera have the congested, cymose inflorescence; but in the 32 Ixioid genera all the three types of inflorescence are shown. For the rest there is little about the perianth that need be alluded to here. Even in the group where the two rows of segments are dissimilar, the outer row is always thoroughly petaloid in texture. The difference between the absence or presence of a tube above the ovary sometimes occurs in plants otherwise very closely allied, and cannot, I think, be regarded as a constant mark of genera. The distinct beard of strong hairs that runs down the claw of the outer segments to form a cushion for the stamens in one large section of *Iris* is remarkable; but in another section of *Iris*, as also in species of *Moræa* and *Vieusseuxia*, the claw is clothed with a finer, more diffused cushion. In another section of *Iris* the claw of the outer segments shows a petaloid crest; and in several of the American

Irideæ the three inner segments are permanently convolute,—all arrangements probably in some way connected with fertilization, the import and mode of action of which have still to be worked out.

Stamens.—In the anther throughout the order there is no material difference in structure; neither can we regard the difference between the epigynous and perigynous insertion of the stamens as here of much account, as one slides into the other very gradually. The three stamens, whatever may be their direction in the expanded flower, are always inserted opposite the outer segments of the perianth. In the Australian genus *Diplarrhena* the three filaments are unequal in length, and one of the anthers is abortive. In one solitary instance, for a typical Iridaceous plant (*Eleutherine anomala*) Herbert has recorded the presence of six stamens; but it has never been seen again, and may perhaps have been a monstrosity of the common American *Eleutherine plicata*. Mr. Bentham regards as an anomalous member of Iridaceæ the Australian genus *Campynema*, which has always six stamens. I have spoken already of the different direction of the stamens in the expanded flower, and how in this respect we get two well-marked types correlated with the shape of the perianth. The three filaments, when free, never become dilated and petaloid; but in a considerable number of Iridaceæ the stamens are more or less decidedly monadelphous; and for this reason, in the old books, the order is separated out under two Linnean classes far removed from one another. In a small number of genera, such as *Tigridia*, *Vieusseuxia*, and *Galaxia*, the filaments are completely and thoroughly monadelphous; and in a large number, such as *Crocus* and *Gladiolus*, they are completely and unmistakably free. But in other genera, well marked by habit, inflorescence, and perianth-characters, such as *Sisyrinchium* and *Libertia*, we get very various degrees of union in plants thoroughly uniform in other points. *Ixia*, a well-marked triandrous generic type, embracing wide specific diversity, has two monadelphous representatives, *Ixia monadelpha* and *curta*. *Romulea*, a genus with 36 triandrous species, with a habit peculiarly its own, has a monadelphous analogue in the single species on which Sweet founded his genus *Spatalanthus*. So that, as a whole, we must say that triandrous pass gradually into the monadelphous Iridaceæ along several lines of junction.

Pistil.—In the ovary there is no material difference in the order, except that in the monotypic genus *Hermodactylus* the three placentas are parietal, and the ovary consequently one-celled. The ovules in each cell are always more than one and superposed. In style and stigma there is a very wide variation within the bounds of the order. We can always trace out three distinct style-branches. Sometimes, as in most of the Euirideæ, these are opposite to the stamens, and consequently to the three outer segments of the perianth; but in another large section of the order, as in *Sisyrinchium*, *Libertia*, and *Patersonia*, the style-branches are alternate with the stamens, and consequently opposite to the three inner segments of the perianth. In *Aristea* the three branches are mere cusps; but, as a rule, they are of considerable length. Sometimes they are subulate, and then may be either entire or more or less deeply forked. A common type is that of *Gladiolus*, in which the stigmas are represented by small, flat, oblanceolate, petaloid expansions. We have an extreme type in the large, petaloid, crested style-branches of *Iris* and *Moræa*. As a whole, we may safely say that some of the best characters of genera are taken from these organs; and, as a rule, it seems that we may safely hold a material difference in style as the mark of a distinct genus, although in *Crocus* we get a wide range of diversity in plants otherwise very near to one another.

Fruit and Seeds.—The fruit is always capsular, with loculicidal dehiscence. In some cases, as for instance, *Tigridia*, *Rigidella*, and *Herbertia*, the top is protruded beyond the perianth-tube, and this leaves a distinct free operculum at the top of the capsule, at the bottom of which, at any rate temporarily, the dehiscence stops. The seeds are generally angular; and in those genera in which they are typically discoid we get species in which the discoid character is lost. *Gladiolus segetum*, with globose seeds, is very difficult to distinguish from *G. byzantinus*, in which they are as flat as in a tulip. *Iris* and *Antholyza* are genera in which we get a very individualized type of flower in combination with seeds of a very different shape. So that for purposes of systematic distinction the seeds in the order are not readily available. The testa in the order differs materially in colour and texture, and needs greater study of fresh specimens than I have been able to give. In embryo and albumen I know of no material difference within the bounds of the order.

Bounds of the Order.—Unlike the Liliaceæ and Amaryllidaceæ, Iridaceæ is one of the most strictly limited of natural orders. The only genus about which there can be any doubt as to whether it should be included in the order or not is *Campynema*, which has an inferior ovary, six stamens with extrorse anthers, melanthoid leaves, and a tuft of fleshy root-fibres. It was placed by Brown in Melanthaceæ, by Mueller in Hypoxidaceæ, but in Mr. Bentham's view is better regarded as an anomalous *Irid.*

Geographical Distribution.—As I am giving a table showing the distribution of each genus, it is not needful to say much on this head. The great concentration of the order is at the Cape, where we get 312 out of 698 species. Out of 65 genera, 25 are exclusively Cape and 7 are mainly Cape plants, but are feebly represented in Tropical Africa. Of the three great subdivisions of the order, the Gladioleæ are confined to the Old World, the other two common to both the Old and the New. Although Europe comes next to the Cape in number of species, it has only one endemic genus (*Hermodactylus*), and all its other species belong either to *Crocus* and *Xiphion* (which it shares with Temperate Asia), to *Iris* (which has the widest dispersion of any genus of the order), or to *Gladiolus*, *Romulea*, and *Moræa* (which it shares with the Cape and Tropical Africa). The 56 Tropical-African species are out-wandering representatives of the great Cape genera. Australia has two endemic genera (*Patersonia* and *Diplarrhena*), a single *Iris*, and *Orthrosanthus* and *Libertia* (which it shares with Tropical America). Out of 21 American genera, 17 are endemic. Out of a little over 100 American species, all but 2 are endemic. Very few of the species occur in more than one of the climatic districts. The two most widely dispersed plants of the order are *Sisyrinchium Bermudianum*, which is common to Ireland and North America, and *Iris sibirica*, which extends from Sweden and France to Japan, and just touches North-west America. There are 6 plants which I have treated as species which are known in gardens only.

Table showing the Distribution of the Genera of Iridaceæ.

Genera.	Europe and North Africa.	Temperate Asia.	Temperate North America.	Tropical Africa.	Tropical Asia and Polynesia.	Tropical America.	Cape.	Australia and New Zealand.	Temperate South America.
Crocus	32	27							
Syringodea.........	...	...	...	...	...	...	3		
Romulea	16	2	...	2	...	...	19		
Ixia................	...	...	...	...	...	...	18		
Streptanthera ...	...	...	...	...	...	...	2		
Geissorhiza	...	...	...	2	...	...	24		
Hesperantha	...	...	...	...	...	...	12		
Morphixia	...	...	...	...	...	...	9		
Sparaxis...........	...	...	...	...	...	...	3		
Dierama............	...	...	...	...	...	...	2		
Hexaglottis	...	...	...	...	...	...	2		
Eleutherine	...	...	...	...	...	2			
Calydorea	...	...	1	...	...	4			
Cardiostigma......	...	...	...	...	...	1			
Nemastylis.........	...	...	3						
Galaxia	...	...	...	...	...	...	2		
Spathalanthus ...	...	...	...	...	...	...	1		
Homeria	...	...	...	...	...	...	5		
Ferraria............	...	...	...	...	...	...	6		
Gelasine	...	...	...	...	...	2			
Chlamydostylus...	...	...	...	...	...	5			
Schizostylis	...	...	...	...	...	...	2		
Witsenia	...	...	...	...	...	...	1		
Nivenia	...	...	...	...	...	...	2		
Klattia	...	...	...	...	...	...	1		
Aristea	...	...	...	3	...	...	12		
Orthrosanthus ...	...	...	...	...	...	2	...	5	
Belemcanda	...	1							
Bobartia............	...	...	...	...	...	...	4		
Tapeinia	...	...	...	...	...	...	...	...	1
Sisyrinchium......	1	...	3	...	1	28	...	...	20
Xiphion	7	9					...		
Sphenostigma ...	...	...	...	...	...	1	...		
Cipura	...	...	...	...	...	2	...		
Alophia	...	...	1	...	...	2	...		
Lansbergia.........	...	...	...	...	...	7	...		
Hesperoxiphion	...	...	...	...	...	2			
Phalocallis	...	...	...	...	...	1			
Cypella	...	...	...	...	...	1		...	2
Moræa	1	1	...	9	...	...	25		
Vieusseuxia	...	...	...	...	...	...	11		
Herbertia	...	...	2	...	...	4	...	...	1
Totals.........	57	40	10	16	1	64	166	5	24

Genera.	Europe and North Africa.	Temperate Asia.	Temperate North America.	Tropical Africa.	Tropical Asia and Polynesia.	Tropical America.	Cape.	Australia and New Zealand.	Temperate South America.
Brought forward	57	40	10	16	1	64	166	5	24
Rigidella	...	...	...	...	...	3			
Hydrotænia	...	...	...	...	...	1			
Tigridia	...	...	...	...	...	6	...	...	1
Iris	28	41	15	1	...	...	2	1	
Hermodactylus	1								
Diplarrhena	...	...	...	...	...	...	...	2	
Marica	...	...	...	...	...	8			
Patersonia	...	...	...	...	...	...	...	19	
Libertia	...	...	...	...	...	...	...	4	4
Anomatheca	...	...	...	2	...	...	2		
Lapeyrousia	...	...	...	7	...	...	12		
Watsonia	...	...	...	1	...	...	12		
Acidanthera	...	...	...	3	...	..	7		
Homoglossum	...	...	...	...	...	...	3		
Tritonia	...	...	...	...	...	...	9		
Freesia	...	...	...	...	...	...	2		
Babiana	...	...	...	...	...	...	19		
Melasphærula	...	...	...	...	...	...	1		
Montbretia	...	...	...	...	...	...	14		
Synnottia	...	..	...	...	...	...	3		
Gladiolus	8	8	...	4	...	...	51		
Antholyza	...	...	...	2	...	...	9		
Totals	94	89	25	56	1	82	312	31	29

Table of the Genera of Iridaceæ.

	Ixieæ.		Irideæ.		Gladioleæ.	
Bulbs with free stamens.	Crocus	51	Xiphion	16	Anomatheca	4
	Syringodea	3	Sphenostigma	1	Lapeyrousia	18
	Romulea	36	Cipura	2	Watsonia	13
	Ixia	18	Alophia	3	Acidanthera	10
	Streptanthera	2	Lansbergia	7	Homoglossum	3
	Geissorhiza	26	Hesperoxiphion	2	Tritonia	9
	Hesperantha	12	Phalocallis	1	Freesia	2
	Morphixia	9	Cypella	2	Babiana	19
	Sparaxis	3			Melasphærula	1
	Dierama	2			Montbretia	14
	Hexaglottis	2			Synnottia	3
	Eleutherine	2			Gladiolus	87
	Calydorea	8			Antholyza	11
	Cardiostigma	1				
	Nemastylis	3				
		178		34		194

Table of the Genera of Iridaceæ (continued).

	Ixieæ.		Irideæ.		Gladioleæ.
Bulbs with monadelphous stamens.	Galaxia	2	Moræa	35	
	Spatalanthus	1	Vieusseuxia	11	
	Homeria	5	Herbertia	6	
	Ferraria	6	Rigidella	3	
	Gelasine	3	Hydrotænia	1	
	Chlamydostylus	5	Tigridia	6	
		22		62	
Non-bulbs with free stamens.	Schizostylis	2	Iris	80	
	Witsenia	1	Hermodactylus	1	
	Nivenia	2	Diplarrhena	2	
	Klattia	1	Mariea	9	
	Aristea	15			
	Orthrosanthus	7			
	Belemcanda	1			
	Bobartia	4			
		33		92	
Non-bulbs, monadelphous stamens.	Tapeinia	1	Libertia	8	
	Sisyrinchium	48	Patersonia	19	
	Solenomelus	7			
		56		27	
Total.	Genera 32, species 289.		Genera 20, species 215.		Genera 13, species 194.

CONSPECTUS TRIBUUM ET GENERUM.

Series I. Ixieæ. Perianthium regulare, segmentis interioribus exterioribus consimilibus, staminibus æquilateralibus.

Tribus 1. Croceæ. Herbæ bulbosæ staminibus liberis.

* *Spathæ unifloræ. Flores haud spicati.*

1. Crocus. Acaulis, spathæ valvis angustis elongatis membranaceis. Perianthii tubus longissimus. Stigmata integra vel multifida. *Europa, Asia occidentalis, Mauritania.*

2. Syringodea. Acaulis, spathæ valvis angustis elongatis membranaceis. Perianthii tubus elongatus. Stigmata integra cuneata. *C. B. Spei.*

3. Romulea. Caulescentes, floribus solitariis vel paucis corymbosis. Spathæ valvæ lanceolatæ, exterior viridis. Perianthii tubus brevissi-

mus. Stigmata bifida ramis brevibus subulatis. *Regio Medit., Africa tropicalis, C. B. Spei.*

** *Spathæ uniflore. Flores spicati.*

4. Ixia. Perianthium rotatum, tubo cylindrico. Spathæ valvæ breves membranaceæ, apice 2–3-dentatæ. *C. B. Spei.*

5. Streptanthera. Perianthium rotatum, tubo brevissimo cylindrico. Spathæ valvæ membranaceæ brunneo-punctatæ apice laceratæ. *C. B. Spei.*

6. Geissorhiza. Perianthium infundibulare, tubo cylindrico. Spathæ valvæ oblongæ virides integræ. Stylus ex tubo protrusus, stigmatibus brevibus subulatis. *C. B. Spei, Madag., Montes Cameroon.*

7. Hesperantha. Perianthium infundibulare, tubo cylindrico. Spathæ valvæ oblongæ virides integræ. Stylus ex tubo vix protrusus, stigmatibus magnis subulatis. *C. B. Spei, Abyssinia.*

8. Morphixia. Perianthium infundibulare, tubo cylindrico brevi vel longo, collo turbinato. Spathæ valvæ breves membranaceæ, apice 2–3-dentatæ. *C. B. Spei.*

9. Sparaxis. Perianthium infundibulare, tubo brevi. Spathæ valvæ membranaceæ brunneo-punctatæ, apice laceratæ. Folia brevia membranacea. *C. B. Spei.*

10. Dierama. Perianthium infundibulare, tubo brevi. Spathæ valvæ magnæ pallidæ membranaceæ parce laceratæ. Folia dura elongata. *C. B. Spei.*

*** *Spathæ 2–pluriflore.*

11. Hexaglottis. Capensis, perianthii tubo producto, spathis sessilibus spicatis.

Americanæ, perianthii tubo nullo, spathis pedunculatis, foliis sæpissime plicatis.

12. Eleutherine. Stigmata 3 integra subulata. Flores albi. *Amer. tropicalis.*

13. Calydorea. Stigmata 3 subulata apice emarginata. Flores cærulei, raro lutei. *Amer. trop.*

14. Cardiostigma. Stigmata 3 plana obcordata. Flores cærulei. *Mexico.*

15. Nemastylus. Stigmata 6 elongata subulata. Flores cærulei. *Amer. bor.-orientalis.*

Tribus 2. GALAXIEÆ. Herbæ bulbosæ, staminibus coalitis.

* *Capenses, stigmatibus plus minus applanatis.*

16. GALAXIA. Acaulis, floribus sessilibus solitariis, tubo producto filiformi. Stigma peltatim trilobatum.

17. SPATALANTHUS. Acaulis, floribus solitariis pedunculatis, tubo brevi infundibulari. Stigmata ligulata emarginata.

18. HOMERIA. Caulescens, floribus paniculatis, ad spatham pluribus. Tubus nullus. Stigmata ligulata petaloidea 2-cristata. Bulbus tunicatus.

19. FERRARIA. Caulescens, floribus paniculatis, ad spatham pluribus. Stigmata petaloidea bifida penicillata. Limbus basi cupularis. Cormus tuberosus.

** *Americanæ, styli ramis subulatis.*

20. GELASINE. Styli rami 3.

21. CHLAMYDOSTYLUS. Styli rami 6.

Tribus 3. ARISTEÆ. Herbæ vel frutices haud bulbosæ, staminibus liberis.

* *Herbæ, floribus spicatis ad spatham solitariis.*

22. SCHIZOSTYLIS. Stylus ex tubo haud protrusus, stigmatibus magnis subulatis. *C. B. Spei.*

** *Frutices, spathis 1–2-floris, ramis ancipitibus distiche foliatis. (Capenses.)*

23. WITSENIA. Perianthium viridulum infundibulare, lobis brevibus conniventibus, exterioribus dorso flavo-tomentosis. Antheræ magnæ lanceolatæ, filamentis brevibus complanatis.

24. NIVENIA. Perianthium cæruleum hypocrateriforme, lobis patulis glabris, tubo cylindrico æquilongis. Antheræ minutæ oblongæ, filamentis brevissimis subulatis.

25. KLATTIA. Perianthium cæruleum, lobis glabris longissimis erectis anguste lingulatis longe unguiculatis. Antheræ magnæ lanceolatæ, filamentis longissimis subulatis.

*** *Herbæ, spathis multifloris.*

26. ARISTEA. Caulis foliosus. Inflorescentia corymbosa, raro capitata. Perianthium cæruleum, tubo brevissimo. Stylus productus apice obscure tricuspidatus. *C. B. Spei, Madag., Abyssinia, Angola.*

27. ORTHROSANTHUS. Caulis parce foliosus. Inflorescentia capitata corymbosa. Perianthium cæruleum, tubo brevissimo. Stylus brevissimus, ramis productis subulatis. *Australia, Amer. tropicalis.*

28. BELEMCANDA. Caulis parce foliosus. Inflorescentia corymbosa. Perianthium rubrum punctatum, tubo nullo. *China.*

29. BOBARTIA. Caulis nudus. Inflorescentia capitata. Perianthium luteum, tubo nullo. *C. B. Spei.*

Tribus 4. SISYRINCHIEÆ. Herbæ haud bulbosæ, staminibus coalitis.

30. TAPEINIA. Spathæ multifloræ, valvis 2. Tubus nullus. *Chili, Patagonia.*

31. SISYRINCHIUM. Spathæ multifloræ, valvis pluribus. Tubus nullus. *America tota, Hibernia.*

32. SOLENOMELUS. Spathæ multifloræ, valvis pluribus. Tubus productus infundibularis vel filiformis. *Andes, Chili, Patagonia.*

Series II. IRIDEÆ. Perianthium regulare, segmentis interioribus exterioribus dissimilibus, staminibus æquilateralibus.

Tribus 5. XIPHIONIDEÆ. Herbæ bulbosæ, staminibus liberis.

* *Segmenta interiora plana.*

33. XIPHION. Stigmata magna petaloidea quadrata, cristis 2 petaloideis instructa. Folia plana. *Regio Mediterranea, Oriens.*

34. SPHENOSTIGMA. Stigmata parva integra cuneata denticulata. Folia plicata. *Brasilia.*

35. CIPURA. Stigmata parva oblonga integra petaloldea. Folia plicata vel raro teretia. *Amer. trop.*

** *Segmenta interiora convoluta.*

36. ALOPHIA. Stigmata bifida, ramis subulatis recurvatis. Folia plicata. *Texas.*

37. LANSBERGIA. Stigmata clavata apice emarginata. Folia teretia vel plana. *Amer. trop.*

38. HESPEROXIPHION. Stigmata magna petaloidea quadrata, cristis tribus petaloideis, intermedia minuta. Folia plicata. *Amer. trop.*

39. PHALOCALLIS. Stylus apice cyathiformis, stigmatibus cristis 2 deltoideis transversalibus præditis. Folia plicata. *Brasilia merid.*

40. Cypella. Stylus apice cyathiformis, ramis stigmatosis bifidis, ramulis cristis tribus subulatis inæqualibus præditis. Folia plicata. *Brasilia.*

Tribus 6. Tigridieæ. Herbæ bulbosæ, staminibus coalitis.

* *Styli rami petaloidei, apice 2-cristati.*

41. Moræa. Filamenta sursum libera, deorsum coalita. Perianthii segmenta interiora exterioribus æquilonga. *C. B. S., Africa tropicalis, Regio mediterranea.*

42. Vieusseuxia. Filamenta prorsus coalita. Perianthii segmenta interiora minuta unguiculata. *C. B. Spei.*

** *Styli rami subulati vel anguste applanati.*

43. Herbertia. Styli rami apice emarginati vel integri. Segmenta interiora parva plana. *America trop. et subtrop.*

44. Rigidella. Styli rami profunde furcati. Segmenta interiora minutissima occulta. *Mexico et Guatemala.*

45. Hydrotænia. Styli rami profunde furcati. Segmenta interiora magna plana rhomboidea. *Mexico.*

46. Tigridia. Styli rami profunde furcati. Segmenta interiora exterioribus multo minora convoluta. *Amer. trop.*

Tribus 7. Euirideæ. Herbæ rhizomatosæ, staminibus liberis.

* *Segmenta interiora haud convoluta.*

47. Iris. Stamina 3 perfecta. Ovarium 3-loculare. Stigmata quadrata petaloidea apice cristis 2 magnis petaloideis instructa. Rhizoma repens, sæpissime crassum. *Regio temp. præsertim zonæ borealis.*

48. Hermodactylus. Stamina et stigmata *Iridis.* Ovarium 1-loculare, placentis 3 parietalibus. Rhizoma digitatum. *Regio mediterranea.*

49. Diplarrhena. Stamina inæqualia arcuata, 1 castratum. Segmentum supremum interius leviter fornicatum. Ovarium et stigmata *Iridis. Australia.*

** *Segmenta interiora convoluta.*

50. Marica. Scapus late applanatus. Stigmata multifida. *Amer. trop.*

Tribus 8. Patersonieæ. Herbæ haud bulbosæ, staminibus sæpissime coalitis.

51. Patersonia. Perianthii tubus productus; segmenta interiora minuta. Stigmata parva, petaloidea. *Australia.*

52. LIBERTIA. Perianthii tubus nullus; segmenta interiora magna. Stigmata subulata. *Australia, Nov. Zeal., Amer. austral. temp.*

Series III. GLADIOLEÆ. Perianthium irregulare, staminibus unilateralibus arcuatis. Omnia bulbosa, filamentis liberis.

Subtribus 1. HOMOGLOSSA. Limbi segmenta subæqualia.

* *Styli apice bifidi, ramis divaricatis.*

53. ANOMATHECA. Inflorescentia spicata. Tubus gracilis, cylindricus. Spathæ valvæ lanceolatæ integræ acutæ. Folia aggregata. *C. B. Spei, Africa tropicalis.*

54. LAPEYROUSIA. Inflorescentia sæpisime corymbosa. Tubus gracilis cylindricus. Folia sæpissime segregata. *C. B. Spei, Africa tropicalis.*

55. WATSONIA. Inflorescentia spicata. Tubus curvatus infundibularis medio cito ampliatus. *C. B. Spei, Madagascaria.*

** *Styli rami integri, stigmatibus parvis petaloideis.*

56. ACIDANTHERA. Tubus elongatus cylindricus subrectus. Spathæ valvæ magnæ integræ virides lanceolatæ. Folia plana glabra segregata. *C. B. Spei, Africa tropicalis.*

57. HOMOGLOSSUM. Tubus curvatus infundibularis medio cito ampliatus. Spathæ valvæ lanceolatæ integræ. Folia angustissima glabra segregata. *C. B. Spei.*

58. TRITONIA. Tubus brevis late infundibularis. Spathæ valvæ breves brunneæ apice dentatæ. Folia plana glabra aggregata. *C. B. Spei.*

60. BABIANA et ACASTE. Tubus brevis late infundibularis. Spathæ valvæ lanceolatæ pilosæ. Folia aggregata pilosa plicata oblique petiolata. *C. B. Spei.*

Subtribus 2. HETEROGLOSSA. Limbi segmenta valde inæqualia.

* *Styli rami bifidi, ramulis divaricatis.*

59. FREESIA. Spathæ valvæ parvæ apice dentatæ. Folia glabra graminoidea. *C. B. Spei.*

** *Styli rami integri.*

a. Humiles, seminibus turgidis.

60. BABIANA et EUBABIANA. Tubus productus apice infundibularis. Spathæ valvæ lanceolatæ subcoriaceæ pilosæ. Folia pilosa plicata oblique petiolata. *C. B. Spei.*

61. MELASPHÆRULA. Tubus brevissimus. Limbi segmenta cuspidata. Spathæ valvæ parvæ integræ glabræ. Folia glabra plana membranacea. *C. B. Spei.*

62. MONTBRETIA. Tubus productus apice infundibularis. Spathæ valvæ sæpissime breves apice sphacelatæ dentatæ. Folia plana glabra. *C. B. Spei.*

63. SYNNOTTIA. Tubus productus infundibularis. Spathæ valvæ breves membranaceæ brunneo punctatæ apice laceratæ. Folia plana glabra. *C. B. Spei.*

b. Elatæ, seminibus sæpissime discoideis alatis.

64. GLADIOLUS. Tubus curvatus infundibularis sensim ampliatus. Segmenta tubo æquilonga vel longiora. *C. B. Spei, Africa trop., Mauritania, Oriens, Europa cent. et austr.*

65. ANTHOLYZA. Tubus curvatus, medio cito ampliatus. Segmenta tubo breviora. *C. B. Spei, Africa trop.*

1. CROCUS, *Tournef.*

Tournef. Instit. 350, t. 183–184; *Linn. Gen.* No. 55; *Ker, Gen. Irid.* 72; *Herbert in Journ. Roy. Hort. Soc.* ii. 249; *Klatt in Linnæa*, xxiv. 675; *Baker in Gard. Chron.* anno 1873.—Crociris, *Schur, Sert.* 1853, 73.

Perianthium regulare infundibulare erectum, tubo supra ovarium longe producto cylindrico recto, segmentis oblongo-spathulatis conformibus diu erectis imbricatis. Stamina 3, ad faucem tubi æquilateraliter inserta, segmentis breviora, filamentis liberis applanatis, antheris erectis linearibus sagittatis. Ovarium triloculare, ovulis in loculo plurimis horizontalibus; stylus filiformis, longissimus, ex tubo perianthii exsertus, ramis stigmatosis tribus subintegris, apice fimbriatis vel multifidis ramis capillaribus patulis. Capsula chartacea, oblongo-trigona, ab apice loculicide trivalvis, seminibus multis globosis, testa membranacea brunnea, albumine corneo, embryone minuto recto axili. *Herbæ acaules, cormo annuo prolifero tunicis membranaceis fibrosis vel reticulatis, foliis anguste linearibus, siccis persistentibus, synanthiis vel hysteranthiis sæpe albo vittatis, spatha basali membranacea vel nulla, tubo spatha propria elongata membranacea* 1–2-*valvi bracteato, floribus magnis speciosis vernalibus vel autumnalibus albis lilacinis vel luteis sæpe vittatis.*

Sect. I. HOLOSTIGMA. *Stigmata tria subintegra, vix fimbriata.*

* *Vernales.*

1. C. CHRYSANTHUS, *Herb. in Journ. Hort. Soc.* ii. 285, *non Bot. Reg.*—C. annulatus, var. chrysanthus, *Herb. in Bot. Mag.* sub t. 3861.—C. croceus, *K. Koch in Linnæa*, xix. 7.—C. sulphureus, *Griseb. Fl. Rumel.* ii. 373, non *Ker. Asia Minor, Roumelia.*

Var. FUSCO-TINCTUS, *Baker. Asia Minor.*

Var. FUSCO-LINEATUS, *Baker. Asia Minor.*

2. C. MÆSIACUS, *Ker in Bot. Mag.* sub t. 652.—C. luteus, *Lam. Encyc.* vi. 385; *Red. Lil.* t. 196; *Reich. Ic. Crit.* tab. 926. fig. 1247.—C. vernus, *Curt. Bot. Mag.* t. 45, non *All.*—C. floribundus, *Haworth in Trans. Hort. Soc.* i. 133.—C. lagenæflorus, var. luteus, *Herb. in Journ. Hort. Soc.* ii. 282. *Asia Minor, Græcia.*

Var. C. AUREUS, *Sibth. & Sm., Flor. Græc.* t. 35; *Bot. Mag.* t. 2986; *Eng. Bot. Suppl.* t. 2646; *Reich. Ic. Crit.* tab. 925, fig. 1246; *Reich. Ic. Germ.* fig. 792.—C. lagenæflorus, var. 3, *Salisb. Parad. Lond.* t. 106.—C. lagenæflorus, *Sabine in Trans. Hort. Soc.* vii. 444, t. 11. fig. 2. *Asia Minor, Græcia, Banatus.*

Var. C. STELLARIS, *Haworth in Trans. Hort. Soc.* i. 136, cum icone. Hybrida hortensis inter *mæsiacum* et *susianum*?

Var. C. SULPHUREUS, *Ker, Bot. Mag.* t. 938 & 1384; *Sabine in Trans. Hort. Soc.* vii. t. 11. fig. 1; *Reich. Ic. Crit.* t. 927. fig. 1248.—C flavus, *Haworth in Trans. Hort. Soc.* i. 135. *Græcia.*

Var. C. LACTEUS, *Sabine in Trans. Hort. Soc.* vii. 447, tab. 11. fig. 3. Forma hortensis.

3. C. GARGARICUS, *Herb. in Journ. Hort. Soc.* ii. 281; *Bot. Reg.* 1847, tab. 116. fig. 1.—C. Thirkeanus, *K. Koch in Linnæa*, xxi. 633. *Asia Minor.*

4. C. SUSIANUS, *Ker in Bot. Mag.* t. 652; *Red. Lil.* t. 293; *Hayne, Arzneik. G.* vi. t. 28; *Reich. Ic. Crit.* t. 928. fig. 1249; *Reich. Ic. Germ.* t. 358. fig. 794.—C. revolutus, *Haworth in Hort. Trans.* i. 136.—C. reticulatus, *M. B. Plant. Ross.* t. 1, *ex parte.*—C. Roegnerianus, *K. Koch in Linnæa*, xxi. 634. *Caucasus, Crimea, Podolia.*

Var. IMMACULATUS, *Herb. in Journ. Hort. Soc.* ii. 279. *Constantinople.*

Var. ANCYRENSIS, *Herb. loc. cit. Asia minor.*

5. C. CREWEI, *Hook. fil. in Bot. Mag.* t. 6168. *Insula Syra.*

6. C. BIFLORUS, *Miller, Gard. Dict.* edit. 7, No. 4; *Bot. Mag.* t. 845; *Andr. Bot. Rep.* t. 362; *Red. Lil.* t. 294; *Reich. Ic. Exot.* t. 34; *Reich. Ic. Crit.* t. 935–936. fig. 1256–59; *Ic. Germ.* t. 386. fig. 788–89.—C. circumscissus, *Haworth in Trans. Hort. Soc.* i. 137.—C. annulatus, *Herb. in Journ. Hort. Soc.* ii. 285. *Italia.*

Var. C. ARGENTEUS, *Sabine in Trans. Hort. Soc.* vii. t. 11. fig. 5.—C. minimus, *Bot. Mag.* t. 2991, non *DC.*—C. præcox, *Haw. E. B. S.* t. 2645.—C. lineatus, *Jan, Elench.* 1; *Reich. Ic. Crit.* fig. 1259; *Reich. Ic. Germ.* fig. 788–9. *Italia.*

Var. C. PUSILLUS, *Tenore, Mem.* 8, t. 2; *Sweet, Brit. Flow. Gard.* t. 106; *Ten. Fl. Nap.* t. 206; *Lodd. Bot. Cab.* t. 1454; *Bot. Reg.* t. 1987. *Italia.*

Var. C. WELDENI, *Hoppe in Bot. Zeit.* 1840, 208; *Bot. Mag.* t. 6211. *Dalmatia.*

Var. C. ADAMI, *Gay in Bull. Féruss.* xv. 219.—C. biflorus, *M. B. Flor. Taur. Cauc., Suppl.* 37.—C. annulatus, var. adamicus, *Herb. in Journ. Hort. Soc.* ii. 285; *Bot. Mag.* t. 3868. *Crimea & Caucasus.*

Var. C. NUBIGENUS, *Herb. Bot. Reg.* 1843, *Misc.* 81. *Asia Minor.*

7. C. VERSICOLOR, *Ker, Bot. Mag.* t. 1110.—C. fragrans, *Haw. in Trans. Hort. Soc.* i. 136.—*C.* Reinwardtii, *Reich. Ic. Crit.* tab. 938. fig. 1261. *Gallia orientalis meridionalis.*

Var. C. CRESTENSIS, *Eugene in Bull. Bot. Soc. France*, xv. 190.

8. C. SUAVEOLENS, *Bertol. Fl. Ital.* i. 208; *Bot. Mag.* t. 3864; *Sweet, Brit. Flow. Gard.* ser. ii. t. 252. *Italia.*

9. C. MINIMUS, *DC. Fl. France*, iii. 243; *Red. Lil.* t. 81; *Reich. Ic. Crit.* t. 491. fig. 1267; *Ic. Germ.* tab. 359. fig. 795.—C. insularis, *Gay in Bull. Féruss.* xv. 221; *Bot. Reg.* 1843, t. 21.—C. corsicus, *Vanucci.*—C. nanus, *DC. Syn. Gall.* 168. *Sardinia, Corsica.*

10. C. BANATICUS, *Heuffel in Flora*, 1835, 255; *Reich. Germ.* t. 361, fig. 800–1, *non Gay.*—C. Heuffellii, *Kornicke in Flora*, 1856, 476.—C. Heuffellianus, *Herbert in Journ. Hort. Soc.* ii. 273. *Hungaria, Transylvania, Croatia.*

11. C. VERNUS, *All. Ped.* i. 84; *Eng. Bot.* t. 344; edit. 3, t. 1499; *Jacq. Austr.* v. t. 36; *Red. Lil.* t. 266; *Reich. Exot.* t. 22; *Reich. Ic. Crit.* t. 929–934; *Ic. Germ.* t. 355; *Fl. Dan.* t. 2042.—C. officinalis sylvestris, *Huds. Angl.* i. 13. *Europa centralis et meridionalis,*

Var. C. ALBIFLORUS, *Kit. in Schult. Œster. Fl.* i. 101; *Reich. Ic. Crit.* fig. 1255; *Ic. Germ.* tab. 355. fig. 787.—C. montanus, *Hoppe.*—C. siculus, *Tineo in Guss. Prodr. Fl. Sic. Suppl.* 7.

Var. C. OBOVATUS, *Haworth in Trans. Hort. Soc.* i. 133.—C. vernus, var. neapolitanus, *Ker in Bot. Mag.* t. 860, 2240.

Var. C. NIVIGENUS, *Herb. in Bot. Reg.* 1843, *Misc.* 82. *Odessa.*

Var. C. TOMMASINIANUS, *Herb. in Journ. Hort. Soc.* ii. 273. *Dalmatia.*

? Var. C. NERVIFOLIUS, *Reich. Ic. Crit.* t. 942–3. fig. 1268–9.

12. C. SIEBERI, *Gay in Bull. Férus.* 1831, 220; *Bot. Mag.* t. 6036.—C. nivalis, *Bory & Chaub. Exp. Morée*, 21, t. 2. fig. 1; *Bot. Reg.* xxxiii. t. 4. fig. 2.—C. Sieberianus, *Herb. in Bot. Mag.* sub t. 3866.—C. sublimis, *Herb. in Bot. Reg.* 1845, *Misc.* 8.—C. Sibthorpianus, *Herb. in Bot. Reg.* 1845, *Misc.* 28. *Græcia, Crete, Asia Minor.*

Var. C. ATTICUS, *Orphanides, MS.* *Græcia.*

Var. C. VELUCHENSIS, *Herb. in Bot. Reg.* 1847, tab. 4. fig. 3; *Bot. Mag.* t. 6197.—C. uniflorus, *Schur in Verh. Sieb. Ver.* 1852, 90.—C. balcanensis, *Janka, Pl. Nov. Turc. Brev.* 8.—C. thessalus, *Boiss. & Sprun. Diag.* xiv. 17. *Græcia, Transylvania.*

Var. C. EXIGUUS, *Schur, Fl. Transyl.* 652. *Transylvania.*

13. C. PARVIFLORUS, *Baker in Trimen's Journ.* 1876, 266. *Taurus Ciliciæ.*

14. C. ALATAVICUS, *Regel et Semenow, Enum. Pl. Semenow,* 111. *Alatau cisiliensis.*

15. C. CARPETANUS, *Boiss. & Reut. Diag.* 24; *Graells Ramill.* fasc. 1, 10, t. 4. *Hispania.*

16. C. RETICULATUS, *M. B. Flor. Taur. Cauc.* i. 28, *et Cent. Pl. Ross.* t. 1, *ex parte*; *Reich. Ic. Crit.* t. 939–940; *Ic. Germ.* t. 356.—C. variegatus, *Hoppe & Hornsch. Tagebuch,* t. 1; *Sturm, Deutsch. Flora,* xiii. t. 54.—C. micranthus, *Boiss. Diag.* ser. 2, iv. 95. *Caucasus, Asia Minor, Austria.*

Var. ALBICANS, *Herb. Bot. Reg.* xxxiii. t. 16. fig. 2.

Var. C. DALMATICUS, *Visiani, Fl. Dalm. Suppl.* t. 2. *Dalmatia.*

17. C. ETRUSCUS, *Parlat. Fl. Ital.* iii. 228. *Italia.*

** *Autumnales.*

18. C. SATIVUS, *Linn. Sp. Plant.* 50; *Lam. Ency.* t. 30; *Red. Lil.* t. 173; *Reich. Ic. Germ.* t. 360; *Eng. Bot.* t. 343; *Royle, Him. Ill.* t. 91. fig. 1.—C. Orsinii, *Parl. Fl. Ital.* iii. 238.—C. Haussknechtii, *Boiss. in Haussk. Exsic.*—? C. intromissus, *Herb. in Journ. Hort. Soc.* ii. 268. *Patria incerta.*

19. C. CARTWRIGHTIANUS, *Herb. in Bot. Reg.* xxx. t. 3. fig. 6, xxxi. t. 37. fig. 6, 7; *Moore in Floral Mag.* 1850, ii. 273, *cum icone.*—C. græcus, *Chapellier in Bull. Soc. Bot. France,* xx. 192. *Græcia.*

20. C. PALLASII, *M. Bieb. Fl. Taur. Cauc.* iii. 35.—C. autumnalis, *M. Bieb. Flor. Taur. Cauc.* i. 27.—C. Pallasianus, *Herb. in Bot. Reg.* xxx. t. 3. fig. 2. *Crimea.*

21. C. THOMASII, *Tenore, Mem. Croc.* 12, t. 4; *Ten. Fl. Nap.* t. 204, 205; *Reich. Ic. Crit.* t. 951.—C. Thomasianus, *Herb. in Bot. Reg.* xxx. t. 3. fig. 6. *Italia meridionalis.*

22. C. VISIANICUS, *Herb. in Bot. Reg.* 1845, *Misc.* 8.—C. Pallasii, *Vis. Fl. Dalm.* 120; *Reich. Ic. Germ.* t. 796, 797, *non M. B.*—C. versicolor, var. dalmaticus, *Herb. in Bot. Mag.* sub t. 3871.—? C. hybernus, *Friv. in Griseb. Fl. Rumel.* ii. 374. *Dalmatia.*

23. C. HADRIATICUS, *Herb. in Bot. Reg.* 1843, *Misc.* 77; *Bot. Reg.* 1847, t. 16. fig. 7–9. *Albania, Insulæ Ionicæ.*

24. C. CAMBESSEDESII, *Gay in Bull. Féruss.* vv. 220.—C. Cambessedesianus, *Herb. in Bot. Reg.* xxxi. t. 37. fig. 4. *Majorca.*

25. C. LAZICUS, *Boiss. in Balan. Pl. Orient.* 1866, *Exsic.* No. 1533. *Lazistan.*

26. C. PELOPONNESIACUS, *Orphan. in Boiss. Diag.* ser. 2, iv. 94. *Græcia.*

27. C. KOTSCHYANUS, *K. Koch, Ind. Sem. Hort. Berol.* 1853. C. zonatus, *Gay in Balansa, Pl. Orient. Exsic.* 1855, No. 823.—? C. karduchorum, *Kotschy, Pl. Cilic. Exsic.* 1859, no. 469. *Asia Minor.*

28. C. SCHAROJANI, *Ruprecht in Regelii Gartenflora,* xvii. 134, t. 578. fig. 2. *Caucasus occidentalis.*

Sect. II. ODONTOSTIGMA. *Stigmata tria distincte breviter fimbriata.*

* *Vernales.*

29. C. OLIVIERI, *Gay in Bull. Féruss.* 1831, 219; *Bot. Mag.* t. 6031. —C. lagenæflorus, var. Olivierianus, *Herb. in Journ. Hort. Soc.* ii. 282.—C. Aucheri, *Boiss. Diag.* xiii. 16. *Græcia, Asia Minor.*

30. C. SUTERIANUS, *Herb. in Bot. Reg.* 1845, *Misc.* 5.—C. chrysanthus, *Herb. in Bot. Reg.* 1847, t. 7. fig. 1. *Asia Minor.*

31. C. ALEPPICUS, *Baker in Gard. Chron.* 1873, 609. *Asia Minor.*

32. C. AERIUS, *Herb. in Journ. Hort. Soc.* ii. 288.—C. Sibthorpianus, var. stauricus, *Herb. in Bot. Reg.* 1845, *Misc.* 5. *Armenia.*
Var. ? C. PULCHRICOLOR, *Herb. loc. cit.*—? C. Pestallozzæ, *Boiss. Diag.* xiii. 17. *Bithynia.*
Var. ? C. CYPRIUS, *Boiss. & Kotschy in Unger & Kots. Cyprus,* 203. *Cyprus.*

33. C. IMPERATI, *Ten. Fl. Neap.* iii. 411; *Mem.* t. 3; *Reich. Ic. Crit.* fig. 1260; *Bot. Reg.* t. 1993.—C. Imperatonius, *Herb. in Journ. Hort. Soc.* ii. 260. *Calabria.*

** *Autumnales.*

34. C. LONGIFLORUS, *Rafin. Caratt.* 84, t. 19. fig. 2; *Bot. Reg.* xxx. t. 3. fig. 4; *Reich Ic. Crit.* fig. 1272–3.—C. odorus, *Biv. Stirp. Sic.* iii. 8, t. 2. *Calabria, Sicilia.*
Var. MELITENSIS, *Herb. in Bot. Reg.* 1844, t. 3. fig. 5. *Melita.*

35. C. SEROTINUS, *Salisb. Parad. Lond.* t. 30; *Bot. Mag.* t. 1267; *Reich. Ic. Crit.* fig. 1271. *Patria incerta.*

Var. C. Salzmanni, *Gay in Bull. Féruss.* xv. 220; *Hook. fil. Bot. Mag.* t. 6000.—C. Salzmannianus, *Herb. in Bot. Reg.* 1847, t. 4. fig 4.—C. tingitanus, *Herb. in Bot. Mag.* sub t. 3868. *Marocco.*

36. C. caspius, *Fisch. & Mey. in Hohen. Enum. Talusch.* 22. *Caucasus.*

37. C. ochroleucus, *Boiss. & Gaill. in Boiss. Diag.* ser. 2, iv. 93. *Hook. fil. Bot. Mag.* t. 5297. *Syria, Palæstina.*

38. C. vallicola, *Herb. in Bot. Reg.* xxxiii. t. 16. fig. 3.—C. Suwarrowianus, *K. Koch in Linnæa,* xxi. 633. *Armenia.*

39. C. damascenus, *Herb. in Bot. Reg.* 1845, t. 37. fig. 1.—C. edulis, *Boiss. & Blanche, Exsic.* *Syria.*

Sect. III. Schizostigma. *Stigmata tria multifida, ramis capillaribus patulis.*

* *Vernales.*

40. C. vitellinus, *Wahl. in Isis,* xvi. 106.—C. syriacus, *Boiss. & Gaill. in Bois. Diag.* ser. 2, iv. 94. *Syria.*

41. C. syriacus, *Herb. in Journ. Hort. Soc.* ii. 282. *Asia Minor.*

42. C. Fleischeri, *Gay in Bull. Féruss.* 1831, 219.—C. Fleischerianus, *Herb. in Journ. Hort. Soc.* ii. 278.—C. smyrnensis, *Poech, Enum. Pl. Ins. Cyp.* 11.—C. candidus, "*Clarke,*" *Travels,* iii. 185; *Boiss. Diag.* xiii. 16.—C. minimus, var. major, *Presl, Bemerk.* 116. *Asia Minor.*

43. C. hyemalis, *Boiss. & Blanche. Diag.* 2, iv. 93. *Syria.*
Var. Gaillardotii, *Boiss. & Blanche in Rel. Mail.* No. 1718. *Syria.*

** *Autumnales.*

44. C. Clusii, *Gay in Bull. Féruss.* xv. 220.—C. clusianus, *Herb. in Journ. Hort. Soc.* ii. 269.—C. autumnalis, *Brotero, Fl. Lusit.* i. 49. *Lusitania.*

45. C. Boryi, *Gay in Bull. Féruss.* xv. 220.—C. Boryanus, *Herb. in Bot. Reg.* 1847, t. 16. fig. 10.—C. ionicus, *Herb. in Bot. Reg.* 1845, *Misc.* 3.—C. marathonisius, *Held, Exsic.* No. 2806.—C. Veneris, *Tapp. in Poech, Pl. Cyp.* 10. *Græcia, Cyprus, Insulæ Ionicæ.*
Var. C. orphanidis, *Hook. fil. Bot. Mag.* t. 5776. *Græcia.*
Var. C. cretensis, *Kornicke in Flora,* 1856, 409. *Creta.*

46. C. Schimperi, *Gay in Schimp. Pl. Cephal. Exsic.*—C. nudiflorus, *Sibth. & Sm. Prod. Græc.* 23, excl. syn.—C. cancellatus, *Herb. in Bot. Mag.* sub t. 3864.—C. Spruneri, *Boiss. & Held, Diag.* vii. 103.—C. mazziaricus, *Herb. in Bot. Reg.* 1845, *Misc.* 3, 1847, tab. 16. fig. 5, 6.—C. dianthus, *K. Koch in Linnæa,* xxi. 634.—C. pylarum, *Gay in Balansa, Pl. Orient. Exsic.* no. 316.—C. cilicius, *Kotschy, Pl. Cilic. Exsic.* no. 316. *Græcia, Asia Minor.*

47. C. MEDIUS, *Balbis, Add. Pedem.* 83; *Bot. Reg.* xxi. t. 37. fig. 5; *Mogg. Cont. Ment.* t. 20. *Gallia meridionalis, Italia.*

48. C. NUDIFLORUS, *Smith in Eng. Bot.* t. 491; edit. 3, t. 1500; *Baxter, Brit. Bot.* t. 137.—C. multifidus, *Ramond in Bull. Soc. Phil.* ii. 129. t. 8.—C. speciosus, *Wils. in Eng. Bot. Suppl.* t. 2752, *non M. B.*—C. pyrenæus (*Parkins.*), *Herb. in Journ. Hort. Soc.* ii. 255. *Gallia, Hispania.*

Var. C. ASTURICUS, *Herb. in Bot. Mag.* t. 3998. fig. 2. *Asturia.*

49. C. SPECIOSUS, *M. B. Flor. Taur. Cauc.* i. 27; *Cent. Ross.* t. 71; *Bot. Mag.* t. 3861; *Bot. Reg.* xxv. t. 40.—C. multifidus, *Reich. Ic. Crit.* fig. 1275, *non Ramond. Austria, Crimea, Caucasus, Persia borealis.*

50. C. PULCHELLUS, *Herb. in Bot. Reg.* 1843, *Misc.* 28; *Bot. Reg.* xxx. t. 3; *Moore, Floral Mag.* 1850, *cum icone. Turcia, Græcia, Asia Minor.*

51. C. BYZANTINUS (*Parkins.*), *Ker in Bot. Mag.* t. 1111; *Herb. in Bot. Reg.* 1847, t. 4. fig. 5; *Bot. Mag.* t. 6141.—C. banaticus, *Gay in Bull. Féruss.* xv. 220, *non Heuffel.*—C. speciosus, *Reich. Pl. Crit.* figs. 1267–8, *non M. B.*—C. iridiflorus, *Heuff. in Œster. Bot. Wochen.* 1857, 222; *Reich. Ic. Germ.* fig. 802–3.—C. Herbertianus, *Kornicke in Walp. Ann.* vi. 51.—Crociris iridiflora, *Schur, Sert.* 1853, 73. *Austria.*

2. SYRINGODEA, *Hook. fil.*

Hook. fil. in Bot. Mag. t. 6072; *Baker in Trimen's Journ.* 1876, 66.

Perianthium hypocrateriforme vel infundibulare, tubo cylindrico elongato sursum vix ampliato, segmentis 6 conformibus obovatis integris vel emarginatis. *Stamina* 3, ad faucem tubi inserta, segmentis breviora, filamentis brevibus liberis filiformibus, antheris basifixis lineari-sagittatis. *Ovarium* triloculare, ovulis in loculo pluribus horizontalibus; *stylus* ex tubo breviter exsertus, *stigmatibus* tribus parvis patulis cuneatis. *Capsula* oblonga membranacea, loculicide trivalvis, seminibus minutis turgidis, testa brunnea. *Herbæ acaules habitu* Croci, *bulbi tunicis membranaceis brunneis secus collum productis, spathis membranaceis unifloris, valvis 2 linearibus tubo brevioribus, floribus erectis lilacinis fauce luteis magnitudine mediocribus.*

* *Segmenta patula emarginata.*

1. S. PULCHELLA, *Hook. fil. in Bot. Mag.* t. 6072. *Cape.*

*** Segmenta ascendentia integra.*

2. S. BICOLOR, *Baker in Trimen, Journ.* 1876, 67.—Trichonema longitubum, *Klatt in Linnæa,* xxxiv. 665. *Cape.*

3. S. FILIFOLIA, *Baker,* loc. cit. *Cape.*

3. ROMULEA, *Maratti.*

Maratti Diss. 13 (anno 1772); *Tenore in Mem. Accad. Neap.* iii. 117, t. 7.—Trichonema, *Ker in Bot. Mag.* sub t. 575 (anno 1801); *Gen. Irid.* 79.—Bulbocodium, *Tournef.*; *Mill. Ic.* t. 240.—Ixiæ sp., *Linn. Sp. Plant.* edit. 2.—Croci sp., *Linn. Sp. Plant.* edit. 1.

Perianthium regulare erectum, tubo brevi infundibulari, segmentis oblongis subconformibus diu erectis imbricatis. Stamina 3, in tubo æquilateraliter inserta, segmentis breviora, filamentis liberis subulatis, antheris erectis linearibus sagittatis. *Ovarium* triloculare, ovulis in loculo plurimis horizontalibus; *stylus* filiformis ex tubo longe exsertus, ramis stigmatosis tribus falcatis brevibus emarginatis. *Capsula* oblonga chartacea loculicide trivalvis, seminibus globosis, testa membranacea nigro-castanea, albumine corneo, embryone recto axili. *Herbæ humiles bulbosæ, tunicis radicalibus crustaceis brunneis, foliis paucis teretibus persistentibus, pedunculis simplicibus vel parce corymbosis, spathæ uniflora valvis duabus lanceolatis integris flore brevioribus, exteriore duro viridulo, interiore minore membranacea, floribus solitariis vel paucis magnitudine mediocribus lilacinis, luteis vel albidis segmentis dorso purpureo-brunneo striatis.*

I. Species mediterraneæ et montium Africæ tropicalis.

** Grandifloræ.*

1. R. BULBOCODIUM, *Seb. & Maur. Fl. Rom.* 17; *Reich. Ic. Fl. Germ.* tab. 356. fig. 782–3; *Mogg. Cont. Ment.* t. 93 A.—Ixia Bulbocodium, *Linn. Sp. Plant.* 51, ex parte majore; *Jacq. Ic.* t. 271; *Bot. Mag.* t. 265.—Trichonema Bulbocodium, *Ker in König & Sims, Ann.* i. 223.—T. collinum, *Salisb. in Trans. Hort. Soc.* i. 317.—Romulea uliginosa, *Kunzem. Flora,* 1846, 690. *Regio mediterranea.*

Var. R. PULCHELLA, *Jord. & Four. Brev.* ii. 106; *Ic.* tab. 107. fig. 163. *Italia.*

Var. R. SYRTICA, *Jord. & Four. Brev.* i. 48; *Ic.* tab. 108. fig. 165. *Gallia meridionalis.*

Var. R. GRANDIFLORA, *Todaro*; *Jord. & Four. Brev.* i. 49; *Ic.* tab. 108. fig. 164. *Sicilia.*

Var. R. FLAVEOLA, *Jord. & Four. Brev.* ii. 106.—*Gallia australis.*

Var. SUBPALUSTRE.—Trichonema subpalustre, *Herb. in Bot. Reg.* xxx. t. 40. fig. 1. *Turcia et insulæ Ionicæ.*

Var. PYLIUM.—Trichonema pylium, *Herb. in Bot. Reg.* xxx. t. 40. fig. 2. *Græcia.*

Var. UMBELLATUM,—Trichonema umbellatum, *Klatt in Linnæa,* xxxiv. 670. *Marocco.*

Var. R. CROCEA, *Bois. & Held, Diagn.* xiii. 18. *Syria.*

Var. NIVALE.—Trichonema nivale, *Boiss. & Kotschy, Diagn.* ser. ii. 492. —T. croceum, *Klatt in Linnæa,* xxxiv. 669. *Syria.*

2. R. CLUSIANA, *Baker.*—Trichonema Clusianum, *Lange, Pugill.* 75; *Ic. Plant. Nov. Hisp.* t. 34. *Hispania australis.*

3. R. CROCIFOLIA, *Visiani, Fl. Dalm. Suppl.* 30, t. 2. *Dalmatia.*

4. R. ELONGATA, *Baker.*—Ixia elongata, *Vahl, Enum.* ii. 51.—Trichonema elongatum, *Ker in Bot. Mag.* sub t. 1225. *Sardinia.*

5. R. GRANDISCAPA, *J. Gay in Bourg. Pl. Canar. Exsic.* 1855, No. 1473.—Trichonema grandiscapa, *Webb, Phyt. Can.* iii. 312, t. 222.— ? R. Hartungii. *Parl. in Walp. Ann.* vi. 49. *Insulæ Canarienses, Madeira.*

** *Purpurascentes.*

6. R. LIGUSTICA, *Parl. Fl. Ital.* iii. 249; *Mogg. Cont. Mentone,* t. 93, B, C. *Liguria.*

7. R. ROLLII, *Parl. Fl. Ital.* iii. 251. *Roma.*

8. R. RAMIFLORA, *Ten. Mem.* 113; *Mogg. Cont. Ment.* t. 92.—Ixia ramiflora, *Ten. Syll.* 25; *Fl. Neap.* tab. 203. fig. 3.—Trichonema ramiflora, *Sweet, Brit. Flow. Gard.* 596. *Regio mediterranea.*

9. R. CORSICA, *Jord. et Four. Brev.* ii. 107. *Corsica.*

10. R. NEGLECTA, *Jord, & Four. Brev.* ii. 107. *Sicilia?*

11. R. PURPURASCENS, *Tenore, Mem.* 117; *Jord. & Four. Ic.* tab. 106. fig. 161.—Ixia purpurascens, *Ten. Fl. Neap.* i. 13. t. 3.—Trichonema purpurascens, *Sweet, Hort. Brit.* 503. *Regio mediterranea.*

Var. ? EDULIS.—Trichonema edule, *Herb. in herb. Kew.* *Socotra et ad ripas Maris Rubri.*

12. R. NUMIDICA, *Jord. et Four. Brev.* i. 49. *Algeria.*

13. R. LINARESII, *Parl. Fl. Panorm.* i. 38; *Jord. & Four. Ic.* t. 107. fig. 162.—Ixia Bulbocodium, *Sibth. & Sm. Fl. Græc.* i. 26, t. 36.— T. maritima, *Sibth. in herb. Banks.*—Trichonema Linaresii, *Klatt in Linn.* xxxiv. 660. *Italia, Græcia, Asia Minor, Abyssinia?*

14. R. Requienii, *Parl. Fl. Ital.* iii. 248; *Jord. & Four. Ic.* t. 109. fig. 166.—Trichonema Linaresii, *Gren. & Godr. Fl. France,* iii. 238, excl. syn. *Corsica.*

*** *Parvifloræ.*

15. R. Columnæ, *Seb. & Maur. Fl. Rom.* 18; *Reich. Ic. Germ.* tab. 356. fig. 784-5; *Mogg. Cont. Ment.* t. 91.—Trichonema Columnæ, *Reich. Fl. Excurs.* i. 83; *Eng. Bot.* edit. iii. t. 1492.—Ixia parviflora, *Salisb. Prod.* 14.—T. minima, *Ten. Syll.* 24.—T. Bulbocodium, *Smith, Eng. Bot.* t. 2549.—T. Bulbocodium, var. parviflora, *Vahl, Enum.* ii. 50.—T. Bulbocodium, var. minima, *Ten. Fl. Nap. Prodr.* 7. *Regio mediterranea, Anglia, Gallia, Insulæ Azoricæ.*

Var. R. modesta, *Jord. & Four. Ic.* t. 110. fig. 168. *Corsica.*

Var. R. subalbida, *Jord. & Four. Ic.* t. 110. fig. 169. *Corsica.*

16. R. Revelieri, *Jord. & Four. Ic.* t. 109. fig. 167. *Corsica.*

17. R. camerooniana, *Baker in Trimen's Journ.* 1876, 236. *Montes Cameroon.*

II. Species capenses.

* *Luteæ.*

18. R. bulbocodioides, *Eckl. Verz. Top.* 19.—Ixia bulbocodioides, *Delaroche, Diss.* 19.—I. recurva, *Red. Lil.* t. 251. fig. 1.—Trichonema recurvum, *Spreng. Syst. Veg.* i. 149.—T. recurvifolium, *Poiret, Ency. Suppl.* iii. 201.—Romulea recurva, *Eckl. Verz. Top.* 20.—R. chloroleuca, *Eckl. Verz. Top.* 20, excl. syn.—Trichonema caulescens, *Ker in Bot. Mag.* t. 1392.—T. hypoxidiflorum, *Salisb. in Trans. Hort. Soc.* i. 316.—Ixia flava, *Lam. Ill.* i. 109.—I. crocea et reflexa, *Thunb. Fl. Cap.* edit. 2, 55. *C. B. Spei.*

19. R. sublutea, *Baker.*—Ixia sublutea, *Lam. Encyc.* iv. 335.—Geissorhiza sublutea, *Ker in K. & S. Ann.* i. 223.—Ixia filifolia, *Red. Lil.* t. 251. fig. 2.—Trichonema filifolia, *Poir. Ency. Suppl.* iii. 201. *C. B. Spei.*

20. R. filifolia, *Eckl. Verz. Top.* 20, excl. syn. *Red.*—Trichonema filifolium, *Klatt in Linn.* xxxiv. 671. *C. B. Spei.*

21. R. Macowani, *Baker in Trimen, Journ.* 1876, 236. *C. B. Spei.*

22. R. tortuosa, *Baker.*—Trichonema tortuosa, *Lichten. Reise,* iv 51.—Ixia tortuosa, *Licht. in Roem. & Schult. Syst.* i. 375. *C. B. Spei.*

** *Rubro-violaceæ.*

23. R. rosea, *Eckl. Verz. Top.* 19.—Ixia rosea, *Murr. Syst. Veg.* xii

75.—Trichonema roseum, *Ker in Bot. Mag.* sub t. 575; *Bot. Mag.* t. 1225.—Crocus capensis, *Burm. Prodr.* 2, ex parte.—R. vulgaris, *Eckl. Verz. Top.* 18.—Ixia radians, *Thunb. Fl. Cap.* edit. 2, 54, ex parte.—I. fugax, *Horn. Hort. Hafn.* i. 50; *Mill. Ic.* 160, tab. 140. *C. B. Spei.*

Var. CELSII, *Planch. in Flore des Serres,* t. 799. *C. B. Spei.*

24. R. LONGIFOLIA, *Baker.*—Trichonema longifolium, *Salisb. in Trans. Hort. Soc.* i. 316.—T. cruciatum, *Ker in B. M.* t. 575, excl. syn. *Jacq.* *C. B. Spei.*

25. R. CRUCIATA, *Baker.*—Ixia cruciata, *Jacq. Ic.* t. 290.—Trichonema cruciatum, *Ker in B. M.* t. 575, ex parte. *C. B. Spei.*

26. R. PUDICA, *Baker.*—Ixia pudica, *Soland. in hb. Banks.*; *Roem. & Schultes, Syst.* i. 377.—Trichonema pudica, *Ker in Bot. Mag.* sub t. 575. *C. B. Spei.*

27. R. CUPREA, *Baker in Trimen, Journ.* 1876, 236.—Trichonema cupreum, *Herb. Icon. inedit.* *C. B. Spei.*

28. R. SPECIOSA, *Baker.*—Ixia Bulbocodium, var. speciosa, *Andr. Bot. Rep.* t. 170.—Trichonema speciosum, *Ker in Kon. & Sims, Ann.* i. 223; *Bot. Mag.* t. 1476.—R. tabularis, *Eckl. Verz. Top.* 19, teste *Klatt.*—Ixia neglecta, *Roem. & Schult. Syst. Veg.* i. *Suppl.* 279. *C. B. Spei.*

29. R. HIRSUTA, *Eckl. Verz. Top.* 19.—Trichonema hirsuta, *Klatt in Linnæa,* xxxiv. 665.—Ixia campanulata, *Lam. Ill.* i. 109, teste *Klatt.* *C. B. Spei.*

30. R. BARBATA, *Baker in Trimen, Journ.* 1876, 236.—Trichonema barbatum, *Herb. icon. inedit.* *C. B. Spei.*

31. R. ARENARIA, *Eckl. Verz. Top.* 18.—Trichonema arenarium, *Klatt in Linnæa,* xxxiv. 667.—R. ramosa, *Eckl. loc. cit., teste Klatt.* *C. B. Spei.*

32. R. DICHOTOMA, *Baker.*—Trichonema dichotomum, *Klatt in Linnæa,* xxxiv. 666. *C. B. Spei.*

*** *Chloroleucæ.*

33. R. CHLOROLEUCA, *Baker, non Eckl.*—Ixia chloroleuca, *Jacq. Ic.* t. 272.—I. ochroleuca, *Vahl, Enum.* ii. 50.—Trichonema ochroleucum, *Ker, Ann.* i. 223.—T. chloroleuca, *Ker, Gen. Irid.* 82. *C. B. Spei.*

34. R. SIMILIS, *Eckl. Top. Verz.* 19. *C. B. Spei.*

35. R. LATIFOLIA, *Baker in Trimen, Journ.* 1876, 237.—Trichonema latifolium, *Herb. icon. inedit.* *C. B. Spei.*

36. R. SPIRALIS, *Baker*.—Trichonema spirale, *Burch. Trav.* i. 260. *C. B. Spei.*

4. IXIA, *Linn.*

Linn. Gen. No. 56, ex parte; *Ker in Konig et Sims, Ann.* i. 226, excl. sp.; *Gen. Irid.* 96, excl. sp.; *Klatt in Linnæa,* xxxiv. 635, excl. sp.—Wuerthea, *Regel. Gartenfl.* ii. t. 46.

Perianthium regulare subrotatum, tubo supra ovarium cylindrico collo haud ampliato, limbo e basi late campanulato, segmentis flore expanso subpatulis oblongis obtusis imbricatis. *Stamina* 3, ad faucem tubi æquilateraliter inserta, segmentis distincte breviora, filamentis erectis filiformibus liberis vel raro coalitis, antheris ligulatis luteis basifixis. *Ovarium* oblongum triloculare, ovulis in loculo plurimis horizontalibus; *stylus* filiformis, ex tubo protrusus, stigmatibus tribus brevibus falcatis subulatis. *Capsula* parva oblonga 6-sulcata ab apice loculicide trivalvis, seminibus confertis triquetris, testa membranacea atro-castanea, albumine corneo. *Herbæ bulbosæ caulescentes capenses, bulbi tunicis subtiliter fibrosis, foliis* 3–6 *basalibus graminoideis flabellatis caule brevioribus, caulinis* 2–3 *similibus reductis, floribus copiose spicatis sæpe paniculatis speciosis albis vel versicoloribus fundo sæpe nigro suffusis, spathæ valvis duabus scariosis parvis imbricatis, exteriore oblongo tunicato apice leviter tricuspidato, interiore angustiore bidentato. Species plurimæ formis intermediis arcte connexæ.*

Subgenus I. EUIXIA. *Filamenta supra basin libera.*

* *Parvifloræ.*

1. I. POLYSTACHYA, *Linn. Sp. Plant.* 51; *Andr. Bot. Rep.* t. 155.—I. erecta, *Berg. Cap.* 5; *Bot. Mag.* t. 623.—I. serotina, *Salisb. Prodr.* 35; *Miller, Ic.* 104, tab. 155. fig. 2. *C. B. Spei.*

Var. I. FLAVESCENS, *Eckl. Verz. Top.* 26. *C. B. Spei.*

2. I. FLEXUOSA, *Linn. Sp. Plant.* 51; *Bot. Mag.* t. 624.—I. polystachya, *Red. Lil.* t. 136.—I. capitata, var. stellata, *Andr. Bot. Rep.* t. 232.—I. erecta, var. violacea, *Thunb. Diss.* No. 18.—I. thyrsiflora, *Delaroche, Diss.* 20.—I. pallide-rosea, *Eckl. Verz. Top.* 24; *Miller, Ic.* tab. 156. fig. 2. *C. B. Spei.*

3. I. HYBRIDA, *Ker in Konig & Sims, Ann.* i. 227.—I. flexuosa, *Ker in Bot. Mag.* t. 127, *non Linn. C. B. Spei.*

4. I. MICRANDRA, *Baker in Trimen, Journ.* 1876, 237. *C. B. Spei.*

** *Grandifloræ immaculatæ.*

5. I. ANEMONÆFLORA, *Jacq. Ic.* t. 273, *non Red. Lil.* t. 65.—Sparaxis anemonæflora, *Ker in Konig & Sims, Ann.* i. 225.—Geissorhiza anemonæflora, *Klatt in Linn.* xxxiv. 656, ex parte. *C. B. Spei.*

6. I. LEUCANTHA, *Jacq. Ic.* t. 278.—I. patens, var. leucantha, *Ker, Gen. Irid.* 98.—I. candida, *DC. in Red. Lil.* t. 426. *C. B. Spei.*

7. I. FUCATA, *Ker in Bot. Mag.* t. 1379. *C. B. Spei.*

8. I. ARISTATA, *Thunb. Diss.* No. 15; *Ker in Bot. Mag.* t. 589. *C. B. Spei.*

9. I. LUTEA, *Baker.*—I. erecta, var. lutea, *Bot. Mag.* t. 846.—I. erecta, *Jacq. Hort. Schœn.* t. 18. *C. B. Spei.*

10. I. FRAGRANS, *Jacq. Ic.* t. 274.—Sparaxis fragrans, *Ker in Konig & Sims, Ann.* i. 274. *C. B. Spei.*

11. I. CAMPANULATA, *Houtt. Handl.* xii. 42, t. 78. fig. 4. *C. B. Spei.*

12. I. PATENS, *Soland. in Ait. Hort. Kew.* i. 59; *Ker in Bot. Mag.* t. 522; *Red. Lil.* t. 140.—I. filiformis, *Vent. Hort. Cels.* t. 48; *Red. Lil.* t. 30.—I. aristata, *Schneer, Ic.* t. 37.—I. flaccida, *Salisb. Prodr.* 37.—I. coccinea, *Thunb. Fl. Cap.* i. 241, ex parte. *C. B. Spei.*

13. I. SPECIOSA, *Andr. Bot. Rep.* t. 126.—I. crateroides, *Ker in Bot. Mag.* t. 594.—I. coccinea, *Thunb. Fl. Cap.* i. 241, ex parte.—I. patens, var. kermesina, *Regel, Gartenfl.* t. 356.—I. pulcherrima, *Eckl. Verz. Top.* 24. *C. B. Spei.*

*** *Grandifloræ maculatæ.*

14. I. MACULATA, *Linn. Sp. Plant.* 1664; *Jacq. Hort. Schœn.* t. 21 (formæ permultæ).—I. Milleri, *Berg. Fl. Cap.* 8.—I. abbreviata, *Houtt, Handl.* xii. t. 78. fig. 3.—I. conica, *Salisb. Prodr.* 36; *Red. Lil.* t. 138; *Ker in Bot. Mag.* t. 539.—I. dubia, *Vent. Choix,* t. 10; *Red. Lil.* t. 64.—I. capitata, *Andr. Bot. Rep.* t. 50; *Miller, Ic.* tab. 156. fig. 1. *C. B. Spei.*

Var. I. FUSCO-CITRINA, *Red. Lil.* t. 86. *C. B. Spei.*

Var. OCHROLEUCA, *Ker in Bot. Mag.* t. 1285.—Ixia ochroleuca, *Sweet, Hort. Brit.* edit. ii. 502.—I. capitata, var., *Andr. Bot. Rep.* t. 159.—I. albo-flavens, *Eckl. Verz. Top.* 27. *C. B. Spei.*

15. I. COLUMELLARIS, *Ker in Bot. Mag.* t. 630.—I. maculata, var., *Andr. Bot. Rep.* t. 256; *Jacq. Hort. Schœn.* t. 19, 20, 22 (formæ permultæ).—Wuerthia elegans, *Regel, Gartenfl.* t. 46. *C. B. Spei.*

Var. RHODOLARYNX, *Baker.*—I. columnaris, var. angustifolia, *Andr. Bot. Rep.* t. 392. *C. B. Spei.*

Var. RUBRO-CÆRULEA, *Baker*. *C. B. Spei.*
Var. RUBRO-LILACINA, *Baker*. *C. B. Spei.*

16. I. VIRIDIFLORA, *Lam. Ency.* iii. 340; *Red. Lil.* t. 466; *Lodd. Bot. Cab.* t. 1548.—I. viridis, *Thunb. Fl. Cap.* 62.—I. maculata, *Thunb. Diss.* No. 19. ex parte.—I. maculata, var. viridis, *Jacq. Hort. Schœn.* t. 23; *Ker in Bot. Mag.* t. 549.—I. spicata, var. viridi-nigra, *Andr. Bot. Rep.* t. 29.—I. spectabilis, *Salisb. Prodr.* 35.—I. pulchra, *Salisb. in Trans. Hort. Soc.* i. 320.—I. prasina, *Soland. in Herb. Banks.* *C. B. Spei.*

Var. I. CANA, *Eckl. Verz. Top.* 26.—I. maculata, var. amethystina, *Ker in Bot. Mag.* t. 789. *C. B. Spei.*

Var. CÆSIA.—I. maculata, var. cæsia, *Bot. Rep.* t. 530. *C. B. Spei.*

Subgenus II. EURÝDICE, *Pers. Syn.* i. 48. *Filamenta prorsus coalita.*

17. I. MONADELPHA, *Delar. Diss.* 22; *Ker in Bot. Mag.* t. 607.—I. columnaris, *Salisb. Prodr.* 36; *Andr. Bot. Rep.* t. 203, 213, 250 (formæ variæ, posterior *I. grandiflora*, Pers. Syn. i. 48).—Galaxia ixiæflora, *Red. Lil.* t. 41 (*G. ramosa*, in textu). *C. B. Spei.*

18. I. CURTA, *Andr. Bot. Rep.* t. 564.—I. monadelpha, var. curta, *Ker in Bot. Mag.* t. 1378.—I columnaris, var. versicolor, *Andr. Bot. Rep.* t. 211.—I. vitellina, lutea, *et* pallide-flavens, *Eckl. Topog. Verz.* 24, 25, teste *Klatt*. *C. B. Spei.*

5. STREPTANTHERA, *Sweet.*

Sweet, Brit. Flow. Gard. t. 209.

Perianthium regulare, tubo brevi cylindrico apice dilatato, limbo late campanulato segmentis conformibus obovato-cuneatis flore expanso patulis. *Stamina* 3, ad faucem tubi æquilateraliter inserta, limbo duplo breviora, filamentis brevibus applanatis erectis, antheris oblongis basi profunde sagittatis. *Ovarium* triloculare, ovulis in lobulo plurimis; *stylus* filiformis ex tubo protrusus, stigmatibus parvis obovatis emarginatis. *Capsula* parva membranacea loculicide trivalvis, seminibus lævibus globosis. *Herbæ Capenses bulbosæ, bulbi tunicis fibrosis, foliis brevibus linearibus flabellato-distichis, spicis paucifloris, spathæ valvis duabus latis membranaceis brunneo punctatis et lineolatis apice dentatis tubo longioribus.*

1. S. ELEGANS, *Sweet, Brit. Flow. Gard.* t. 209; *Lodd. Bot. Cab.* t. 1359. *C. B. Spei.*

2. S. CUPREA, *Sweet, Hort. Brit.* edit. 2, 501; *Brit. Flow. Gard.* ser. ii. t. 122; *Paxt. Mag.* i. 8, *cum icone.*—Sparaxis cuprea, *Klatt in Linnæa,* xxxv. 378. *C. B. Spei.*

6. GEISSORHIZA, *Ker.*

Ker in Bot. Mag. sub t. 672; *Gen. Irid.* 83; *Klatt in Linnæa,* xxxiv. 650.—Rochea, *Salisb. in Trans. Hort. Soc.* i. 322 (nomen). —Weihea, *Ecklon, Top. Verz.* 22 (nomen).—Ixiæ sp., *Thunb. etc.*

Perianthium regulare infundibulare, tubo brevi cylindrico sursum vix ampliato spatha plerumque vix breviore, segmentis 6 oblongis conformibus diu ascendentibus. *Stamina* 3, ad faucem tubi æquilateraliter inserta, filamentis brevibus subulatis, antheris oblongis basifixis. *Ovarium* sessile triloculare, ovulis in loculo pluribus horizontalibus; *stylus* filiformis erectus ex tubo protrusus, ramis stigmatosis parvis falcatis clavatis integris. *Capsula* parva, oblonga, chartacea, loculicide trivalvis, seminibus globosis, testa membranacea brunnea, albumine carneo. *Herbæ bulbosæ, bulbi parvi tunicis brunneis duris sæpe e basi in segmenta linearia multiserialiter imbricata sectis, foliis sæpe tribus angustis superpositis, superiore basi dilatata caulem amplectente, floribus paucis in spicas secundas dispositis, spathæ valvis oblongis integris viridibus vel apice scariosis tubum perianthii prorsus involventibus.*

Sect. I. ROCHEA. *Tubus perianthii ex spatha haud exsertus.*

* *Triphyllæ parvifloræ.*

1. G. HUMILIS, *Ker in König & Sims, Ann.* i. 223.—Ixia humilis, *Thunb. Diss.* No. 4.—G. setacea β, *Ker in Bot. Mag.* t. 1255.—G. Brehmii, *Eckl. Top. Verz.* 21; *Klatt in Linnæa,* xxxiv. 653.—G. aurea, *Eckl. Top. Verz.* 21, teste *Klatt.* *Cap. B. Spei.*

2. G. JUNCEA, *Link, Unio, Itin.* No. 314.—Ixia juncea, *Link, Enum.* 50. *C. B. Spei.*

3. G. PURPUREO-LUTEA, *Baker in Trimen, Journ.* 1876, 238. *C. B. Spei.*

4. G. ERECTA, *Baker in Trimen, Journ.* 1876, 238. *C. B. Spei.*

5. G. SECUNDA, *Ker in König & Sims, Ann.* i. 223.—Ixia secunda, *Delaroche, Descr.* 17; *Bot. Mag.* t. 597, *non Houttuyn.*—I. pusilla, *Andr. Bot. Rep.* t. 245.—I. scillaris, *Thunb. Diss.* No. 14.—G. imbricata, *E. Meyer in Herb. Drege.* *C. B. Spei.*

Var. G. RAMOSA, *Klatt in Linn.* xxxiv. 657.—Ixia ramosa, *Ker in Bot. Mag.* sub t. 549. *C. B. Spei.*

Var. G. SETIFOLIA, *Eckl. Topog. Verz.* 22. *C. B. Spei.*

6. G. HIRTA, *Ker in König & Sims, Ann.* i. 223.—Ixia hirta, *Thunb. Diss.* No. 6. *C. B. Spei.*

7. G. FILIFOLIA, *Baker in Trimen, Journ.* 1876, 238. *C. B. Spei.*

8. G. WRIGHTII, *Baker in Trimen, Journ.* 1876, 238. *C. B. Spei.*

** *Triphyllæ grandifloræ.*

9. G. FURVA, *Ker in König & Sims, Ann.* i. 224.—Ixia furva, *Soland. in Herb. Banks.* *C. B. Spei.*

10. G. ROCHENSIS, *Ker in König & Sims, Ann.* i. 223.—Ixia Rochensis, *Ker in Bot. Mag.* t. 598.—I. radians, *Thunb. Fl. Cap.* i. 217, ex parte.—I. monanthos, *Thunb. Fl. Cap.* edit. 2, 57.—Geissorhiza Rocheana et monantha, *Sweet, Hort. Brit.* edit. 2, 503.—G. setacea *a*, *Ker in Bot. Mag.* sub t. 1255.—G. secunda, *Houtt. Handl.* xii. t. 78. fig. 1, *non Delaroche.*—Rochea venusta, *Salisb. in Trans. Hort. Soc.* i. 322. *C. B. Spei.*

11. G. CILIARIS, *Salisb. in Trans. Hort. Soc.* i. 321.—G. quinquangularis, *Ecklon in Unio, Itin.* No. 312; *Klatt in Linnæa*, xxxiv. 654.—G rosea, *Eckl. Top. Verz.* 20.—Hesperantha quinquangularis, *Eckl. Top. Verz.* 23. *C. B. Spei.*

12. G. IMBRICATA, *Ker in König & Sims, Ann.* i. 224.—Ixia imbricata, *Delaroche, Diss.* 17.—G. arenaria, *Eckl. Top. Verz.* 21. *C. B. Spei.*

13. G. INFLEXA, *Ker in König & Sims, Ann.* i. 223.—Ixia inflexa, *Delaroche, Diss.* 15.—G. vaginata, *Sweet, Brit. Flow. Gard.* t. 138. *C. B. Spei.*

14. G. LATIFOLIA, *Baker.*—Ixia latifolia, *Delaroche, Diss.* No. 22. *C. B. Spei.*

15. G. OBTUSATA, *Ker in Bot. Mag.* t. 672.—Ixia obtusata, *Soland. in Herb. Banks.*—I. geminata, *Vahl, Enum.* ii. 68. *C. B. Spei.*

*** *Polyphyllæ.*

16. G. ORNITHOGALOIDES, *Klatt in Linn.* xxxiv. 656.—G. romuleoides, *Eckl. Top. Verz.* 21. *C. B. Spei.*

17. G. BOJERI, *Baker in Trimen, Journ.* 1876, 239. *Madagascaria.*

18. G. ALPINA, *Hook. fil. in Journ. Linn. Soc.* vii. 223. *Montes Cameroon.*

19. G. SETACEA, *Baker, non Ker.*—Ixia setacea, *Thunb. Diss.* No. 13. —G. tabularis, *Eckl. MS.*—G. recurvifolia, *Klatt in Linn.* xxxiv. 655, excl. syn. *Red.* *C. B. Spei.*

20. G. GEMINATA, *E. Meyer in Herb. Drege.* *C. B. Spei.*

21. G. QUADRANGULA, *Ker, Gen. Irid.* 88.—Ixia quadrangula, *Delaroche, Diss.* 16. *C. B. Spei.*

22. G. LUTEA, *Eckl. Top. Verz.* 21. *C. B. Spei.*

23. G. FOLIOSA, *Klatt in Linnæa,* xxxiv. 658. *C. B. Spei.*

24. G. GRANDIS, *Hook. fil. in Bot. Mag.* t. 5877. *C. B. Spei.*

Sect. II. WEIHEA. *Tubus perianthii ex spatha distincte exsertus.*

25. G. MINIMA, *Baker in Trimen, Journ.* 1876, 239. *C. B. Spei.*

26. G. EXCISA, *Ker in König & Sims, Ann.* i. 223.—Ixia excisa, *Thunb. Diss.* No. 24, tab. 1. fig. 4; *Bot. Mag.* t. 584.—Weihea excisa, *Eckl. Top. Verz.* 22.—Ixia ovata, *Burm. Prodr. Cap.* 1 (anno 1768). *C. B. Spei.*

7. HESPERANTHA, *Ker.*

Ker in König et Sims, Ann. i. 224.—Ixiæ sp. *Thunb., etc.*

Perianthium regulare infundibulare, tubo cylindrico recto vel curvato, limbi segmentis conformibus oblongis vel obovatis. *Stamina* 3, ad faucem tubi æquilateraliter inserta, filamentis brevibus subulatis, antheris magnis ligulatis limbo brevioribus. *Ovarium* triloculare, ovulis in loculo crebris; *stylus* filiformis ex tubo vix vel haud exsertus, stigmatibus tribus integris subulatis. *Capsula* parva oblonga membranacea loculicide trivalvis, seminibus crebris triquetris, testa membranacea brunnea, albumine corneo. *Herbæ bulbosæ, bulbi basi planis, tunicis multis brunneis basi circumscissis, sæpe e basi in segmenta lanceolata imbricata sectis, foliis angustis planis graminoideis, floribus spicatis sæpe vespertinis, spathæ valvis duabus oblongis integris viridibus tubum involventibus. Ad* Geissorhizam *arcte accedit; præsertim differt antheris magnis, stylo incluso, stigmatibus magnis subulatis.*

* *Perianthii tubus rectus.*

1. H. HUMILIS, *Baker in Trimen, Journ.* 1876, 239. *C. B. Spei.*

2. H. CINNAMOMEA, *Ker in König & Sims, Ann.* i. 225; *Bot. Mag.* t. 1054.—Ixia cinnamomea, *Thunb. Diss.* No. 9, tab. 2, *non Andrews.* *C. B. Spei.*

3. H. PILOSA, *Ker in König & Sims, Ann.* i. 225; *Bot. Mag.* t. 1475. —Ixia pilosa, *Thunb. Diss.* No. 5. *C. B. Spei.*

4. H. GRAMINIFOLIA, *Sweet, Hort. Brit.* edit. 2, 503.—H. pilosa, var. nuda, *Ker in Bot. Mag.* t. 1254. *C. B. Spei.*

5. H. FALCATA, *Ker in König & Sims, Ann.* i. 224.—Ixia falcata, *Thunb. Diss.* No. 23, tab. 1; *Jacq. Ic.* t. 276; *Bot. Mag.* t. 566.—I. cinnamomea, *Andr. Bot. Rep.* t. 44, *non Thunb.* *C. B. Spei.*

6. H. PETITIANA, *Baker.*—Ixia Petitiana, *A. Rich. Fl. Abyss.* ii. 309.—Geissorhiza abyssinica, *Klatt in Linnæa,* xxxiv. 716, *non R. Br.* *Abyssinia.*

Var. H. UNIFLORA, *Hochst. in Schimp. Pl. Abyss.* no. 1239.—Ixia Hochstetteriana, *A. Rich. Fl. Abyss.* ii. 309. *Abyssinia.*

7. H. LONGITUBA, *Baker.*—Geissorhiza longituba, *Klatt in Linnæa,* xxxv. 383.—Ixia acuta, *Lichten. in Roem. & Schult. Syst. Veg.* i. 383?—Hesperantha acuta, *Ker, Gen. Irid.* 91? *C. B. Spei.*

8. H. RUBELLA, *Baker in Trimen, Journ.* 1876, 239. *C. B. Spei.*

9. H. BAURII, *Baker in Trimen, Journ.* 1876, 182. *Kaffraria.*

** *Perianthii tubus decurvatus.*

10. H. RADIATA, *Ker in König & Sims, Ann.* i. 224.—Ixia radiata, *Jacq. Ic.* t. 280; *Ker in Bot. Mag.* t. 573; *Red. Lil.* t. 441.—I. fistulosa, *Andr. Bot. Rep.* t. 59.—Gladiolus recurvatus, *Thunb. Diss.* No. 3.—Ixia recurva, *Vahl, Enum.* ii. 58. *C. B. Spei.*

Var. CARICINA, *Ker in Bot. Mag. sub* t. 573; *Bot. Mag.* t. 790.—Hesperantha setacea, *Eckl. Top. Verz.* 22. *C. B. Spei.*

11. H. ANGUSTA, *Ker in König & Sims, Ann.* i. 225.—Ixia angusta, *Willd. Sp. Plant.* i. 202.—I. radiata, var. angusta, *Ker in Bot. Mag. sub* t. 573.—I. linearis, *Jacq. Ic.* t. 279, *non Thunb.*—Hesperantha virginea, *Ker in König & Sims, Ann.* i. 224.—Ixia virginea, *Soland. in Herb. Banks.* *C. B. Spei.*

12. H. BULBIFERA, *Baker in Trimen, Journ.* 1876, 182. *C. B. Spei.*

8. MORPHIXIA, *Ker.*

Ker, Gen. Irid. 105.—Hyalis, *Salisb. in Trans. Hort. Soc.* i. 317 (*nomen*).—Ixiæ sp., *Delaroche etc.*

Perianthium regulare, tubo recto brevi vel elongato cylindrico, collo turbinato, segmentis æqualibus anguste oblongis obtusis flore expanso subpatulis. Stamina 3 in parte dilatata tubi æquilateraliter inserta, filamentis brevibus rectis filiformibus, antheris basifixis oblongis. Ovarium triloculare, ovulis in loculo plurimis horizontalibus; stylus filiformis ex tubo sæpe protrusus, stigmatibus tribus brevibus falcatis clavatis integris. Capsula parva oblonga chartacea 6-sulcata, seminibus crebris triquetris, testa atro-castanea, albumine corneo. *Herbæ bulbosæ Capenses,*

bulbi tunicis membranaceis, foliis paucis graminoideis caule brevioribus, floribus spicatis sæpe paniculatis, spathæ valvis duabus parvis membranaceis, exteriore tricuspidata, interiore angustiore bicuspidata.

* *Brevicolles.*

1. M. CAPILLARIS, *Ker, Gen. Irid.* 106.—Ixia capillaris, *Thunb. Diss.* No. 12, t. 2. fig. 2; *Ker in Bot. Mag.* t. 617.—I. rapunculoides, *Red. Lil.* t. 431.—I. striata, *Vahl, Enum.* ii. 65.—Hyalis latifolia, *Salisb. in Trans. Hort. Soc.* i. 317. *C. B. Spei.*

Var. INCARNATA.—Ixia incarnata, *Jacq. Ic.* t. 282.—Morphixia incarnata, *Ker, Gen. Irid.* 107.—I. capillaris, var. incarnata, *Ker in Bot. Mag. sub* t. 570. *C. B. Spei.*

Var. LANCEA.—Ixia lancea, *Jacq. Ic.* t. 281.—Hyalis marginifolia, *Salisb. in Trans. Hort. Soc.* i. 318. *C. B. Spei.*

2. M. LINEARIS, *Ker, Gen. Irid.* 106.—Ixia linearis, *Thunb. Diss.* No. 11.—I. capillaris, var. gracillima, *Ker, in Bot. Mag.* t. 570.—Hyalis gracilis, *Salisb. in Trans. Hort. Soc.* i. 517.—I. tenuifolia, *Vahl, Enum.* ii. 62. *C. B. Spei.*

3. M. AULICA, *Ker, Gen. Irid.* 107.—I. aulica, *Soland. in Ait. Hort. Kew.* i. 57.—I. capillaris, var. aulica, *Ker, in Bot. Mag.* t. 1013.—Hyalis aulica, *Salisb. in Trans. Hort. Soc.* i. 318.—I. phlogiflora, *Red. Lil.* t. 432. *C. B. Spei.*

4. M. ODORATA, *Baker.*—Ixia odorata, *Ker, Gen. Irid.* 101.—I. erecta, var. lutea odorata, *Ker in Bot. Mag.* t. 1173.—I. erecta, *Jacq. Hort. Schœn.* t. 18, fig. minor. *C. B. Spei.*

5. M. TRICHORHIZA, *Baker in Trimen, Journ.* 1876, 237. *Natal.*

** *Longicolles.*

6. M. PANICULATA, *Baker, Fl. Maur.* 365.—Ixia paniculata, *Delaroche, Diss.* 26, t. 1.—I. longiflora, *Berg. Pl. Cap.* 7; *Bot. Mag.* t. 256; *Red. Lil.* t. 256.—Gladiolus longiflorus, *Thunb. Diss.* No. 22; *Jacq. Coll.* v. 23, t. 7.—Tritonia longiflora, *Ker in König & Sims, Ann.* i. 228; *Bot. Mag.* t. 1502. fig. dextra.—Hyalis longiflora, *Salisb. in Trans. Hort. Soc.* i. 318.—Freesea longiflora, *Eckl. Top. Verz.* 30.—Gladiolus ixioides, *Thunb. Fl. Cap.* edit. 2, 52. *C. B. Spei.*

Var. TENUIFLORA.—Tritonia tenuiflora, *Ker in Bot. Mag. sub* t. 1275.—Ixia tenuiflora, *Vahl, Enum.* ii. 266.—Gladiolus longiflorus, *Jacq. Ic.* t. 263.—Tritonia longiflora, var., *Ker in Bot. Mag.* t. 1502. fig. sinistra.—T. concolor, *Sweet, Brit. Flow. Gard.* edit. ii. 502. *C. B. Spei.*

Var. ROCHENSIS.—Tritonia rochensis, *Ker, Bot. Mag.* t. 1503, excl. syn. *C. B. Spei.*

7. M. Cooperi, *Baker in Trimen, Journ.* 1876, 237. *C. B. Spei.*

8. M. nervosa, *Baker in Trimen, Journ.* 1876, 237. *C. B. Spei.*

9. M. juncifolia, *Baker in Trimen, Journ.* 1876, 238. *C. B. Spei.*

9. Sparaxis, *Ker.*

Ker in König & Sims, Ann. i. 225, excl. sp.; *Gen. Irid.* 91, excl. sp.; *Klatt in Linnæa,* xxxii. 747.—Ixiæ sp. *Linn. etc.*

Perianthium regulare, infundibulare, tubo erecto brevi dimidio inferiore cylindrico, dimidio superiore conico, segmentis oblongis obtusis æqualibus diu ascendentibus. *Stamina* 3 prope medium tubi æquilateraliter inserta, filamentis brevibus filiformibus, antheris magnis ligulatis basifixis. *Ovarium* 3-loculare, ovulis in loculo crebris horizontalibus; stylus filiformis, ex tubo protrusus, stigmatibus tribus magnis falcatis subulatis integris. *Capsula* parva, membranacea, oblongo-globosa, loculicide trivalvis, seminibus crebris triquetris, testa membranacea atro-castanea, albumine corneo. *Herbæ bulbosæ capenses, bulbi tunicis permultis subtiliter fibroso-reticulatis, foliis plurimis radicalibus linearibus flabellato-distichis caule brevioribus, caule brevi foliis* 1–2 *similibus reductis prædito, spicis paucifloris raro paniculatis, floribus speciosis versicoloribus, spathæ valvis duabus membranaceis brunneo lineatis et punctatis, ab apice profunde fimbriatis, dentibus lineari-subulatis brunneis, exteriore latissima tubum amplectente, interiore angustiore lanceolata.*

1. S. bulbifera, *Ker in König & Sims, Ann.* i. 226.—Ixia bulbifera, *Linn. Sp. Plant.* ii. 51; *Ker in Bot. Mag.* t. 545; *Red. Lil.* t. 128; *Andr. Rep.* t. 48.—I. bulbifera, var. flava, *Thunb. Diss.* no. 16.—I. anemonæflora, *Red. Lil.* t. 85; *Miller, Ic.* 158, tab. 286. fig. 2. *C. B. Spei.*

2. S. grandiflora, *Ker in König & Sims, Ann.* i. 225; *Bot. Mag.* t. 779; *Bot. Reg.* t. 258.—Ixia grandiflora, *Delar. Diss.* 23; *Houtt. Handl.* xii. 37, tab. 77. fig. 3; *Ker in Bot. Mag.* t. 541; *Red. Lil.* tab. 179, 362.—I. bulbifera, *Thunb. Diss.* No. 16, *ex parte.*—I. aristata, *Soland. in Ait. Hort. Kew.* i. 57; *Andr. Bot. Rep.* t. 87, *non Thunb.*—I. holosericea, *Jacq. Hort. Schoen.* i. 9, t. 17.—I. monanthos, *Delar, Diss.* 24, *non Thunb.*—I. uniflora, *Linn. Mant.* 27; *Jacq. Ic.* t. 283.—S. fimbriata, *Ker in König & Sims, Ann.* i. 226.—Ixia fimbriata, *Lam. Ency.* iii. 339.—Belemcauda semiflexuosa, *Moench. Meth. Suppl.* 214.—S. lacera, *Ker in König & Sims, Ann.* i. 226. *C. B. Spei.*

Var. S. Liliago, *Sweet, Hort. Brit.* edit. 2, 501.—S. grandiflora, var. Liliago, *Bot. Reg.* t. 258.—Ixia Liliago, *Red. Lil.* t. 109. *C. B. Spei.*

Var. S. stellaris, *D. Don in Sweet, Brit. Flow. Gard.* ser. ii. t. 383, *C. B. Spei.*

Var. S. lineata, *Sweet, Brit. Flow. Gard.* ser. ii. t. 131. *C. B. Spei.*

3. S. tricolor, *Ker in König & Sims, Ann.* i. 225; *Ker in Bot. Mag.* t. 1482.—Ixia tricolor, *Curt. Bot. Mag.* t. 381; *Schneev. Ic.* t. 39; *Red. Lil.* t. 129. *C. B. Spei.*

Var. S. versicolor, *Sweet, Brit. Flow. Gard.* t. 160. *C. B. Spei.*

Var. S. Griffini, *Sweet, Hort. Brit.* edit. ii. 501.—S. tricolor, var. violaceo-purpurea, *Ker in Bot. Mag.* t. 1482. fig. inf. *C. B. Spei.*

Var. S. blanda, *Sweet, Hort. Brit.* edit. ii. 501.—S. tricolor, var. subroseo-albida, *Ker in Bot. Mag.* t. 1482. fig. med.

10. Dierama, *K. Koch.*

K. Koch in Walp. Ann. vi. 42; *Klatt in Linnæa,* xxxii. 751 (Dierama).—Sparaxis sp., *Ker.*—Ixiæ sp., *Thunb.*

Perianthium regulare infundibulare, tubo brevi e basi ad apicem sensim ampliato, segmentis oblongis obtusis conformibus diu ascendentibus. *Stamina* 3, in tubo æquilateraliter inserta, limbo distincte breviora, filamentis filiformibus, antheris ligulatis basifixis. *Ovarium* triloculare, ovulis in loculo pluribus; stylus filiformis rectus, ex tubo protrusus, ramis stigmatosis tribus falcatis brevibus clavatis integris. *Capsula* parva globoso-turbinata, membranacea, seminibus in loculo circiter 6 triquetris, testa brunnea, albumine corneo. *Herbæ bulbosæ, bulbi magni tunicis permultis apice setiferis in fibras parallelas solutis, foliis radicalibus multis longis duris anguste ensiformibus, caule longissimo gracili, spicis laxe paniculatis ramis capillaribus, floribus concoloribus, spathæ valvis magnis oblongo-lanceolatis membranaceis pallidis eroso-laceris.*

1. D. pendula, *Baker.*—Ixia pendula, *Thunb. Diss.* no. 16.—Sparaxis pendula, *Ker in Bot. Mag.* sub t. 1482; *Bot. Reg.* t. 1360.—Dierama ensifolium, *K. Koch & Bouché in Walp. Ann.* vi. 43.—Watsonia palustris, *Pers. Syn.* i. 45. *C. B. Spei et Natalia.*

2. D. pulcherrima, *Baker.*—Sparaxis pulcherrima, *Hook. fil. in Bot. Mag.* t. 5555.—S. atropurpurea, *Hort.*—*C. B. Spei et Transvaal.*

11. Hexaglottis, *Vent.*

Vent. Dec. No. 3.—Morææ *et* Ixiæ sp. auct.

Perianthium regulare rotatum flavum, tubo supra ovarium brevi recto filiformi, segmentis 6 oblongo-ligulatis flore expanso patulis post anthesin spiraliter tortis. *Stamina* 3, ad faucem tubi æquilateraliter inserta, limbo multo breviora, filamentis subulatis, antheris oblongis spiraliter tortis, connectivo angusto. *Ovarium* cylindricum 6-sulcatum triloculare, ovulis in loculo crebris horizontalibus ; stylus ex tubo haud exsertus, stigmatibus 6 subulatis patulis antheris æquilongis. *Capsula* nigra crustacea cylindrica operculata, apice loculicide trivalvis, seminibus minutis angulatis, testa nigra. *Herbæ bulbosæ Capenses, tunicis e basi in segmenta linearia nigra sectis, apice setosis, foliis duobus angustis duris persistentibus, spathis cylindricis multifloris in spicas elongatas dispositis, valvis duris linearibus acutis, pedicellis ex spatha protrusis, floribus successivis fugacibus.*

1. H. LONGIFOLIA, *Vent. Decad.* 6.—Ixia longifolia, *Jacq. Hort. Vind.* iii. 47, t. 90 (1776).—Moræa flexuosa, *Linn. fil. Suppl.* 100; *Ker in Bot. Mag.* t. 695.—Sisyrinchium flexuosum, *Spreng. Syst. Veg.* i. 167.—Hexaglottis flexuosa, *Sweet, Hort. Brit.* edit. ii. 498.—Homeria flexuosa, *Baker in Ref. Bot.* t. 24.—Moræa longifolia, *Pers. Syn.* i. 49. *C. B. Spei.*

2. H. VIRGATA, *Sweet, Hort. Brit.* edit. 2, 498.—Moræa virgata, *Jacq. Ic.* t. 228.—Ixia virgata, *Willd. Sp. Plant.* i. 202. *C. B. Spei.*

12. ELEUTHERINE, *Herbert.*

Herb. in Bot. Reg. xxix. sub t. 57.—Galatea, *Salisb. in Trans. Hort. Soc.* i. 310 (nomen).

Perianthium regulare rotatum album, tubo supra ovarium nullo, segmentis 6 obovatis flore expanso patulis, interioribus paulo minoribus. *Stamina* 3 vel 6 epigyna limbo breviora, filamentis erectis brevissimis subulatis, antheris ligulatis basifixis. *Ovarium* clavatum triloculare, ovulis in loculo plurimis crebris horizontalibus ; stylus brevissimus triqueter, stigmatibus tribus erectis subulatis integris. *Capsula* cylindrica 6-sulcata cartilaginea operculata ex apice loculicide trivalvis, seminibus globosis, testa brunnea, albumine corneo. *Herbæ bulbosæ americanæ, tunicis multis membranaceis castaneis, foliis paucis petiolatis latis plicis multis, caule elongato apice florifero geniculato, spathis paucis oblongis pedunculatis multifloris, valvis multis scariosis viridibus arcte imbricatis, pedicellis spatha brevioribus, floribus fugitivis successivis.*

1. E. PLICATA, *Herb. loc. cit.*—Moræa plicata, *Swartz, Fl. Ind. Occ.* 82.

—Marica plicata, *Ker in Bot. Mag.* t. 655.—Galatea plicata, *Salisb. loc. cit.*—Cipura plicata, *Griseb. Flor. Brit. West Ind.* 589.—Sisyrinchium palmifolium, *Linn. herb. ex parte*; *Cav. Diss.* vi. 348, t. 19. fig. 1; *Red. Lil.* t. 352.—Moræa palmifolia, *Jacq. Ic.* t. 227.—Ixia americana, *Aublet, Guian.* i. 33.—Ferraria parviflora, *Salisb. Prodr.* 43.—Sisyrinchium latifolium, *Swartz, Prodr.* 17.—S. bulbosum, *Miller, Dict.* No. 3. *America tropicalis.*

2. E. ANOMALA, *Herb. loc. cit. America tropicalis.*

13. CALYDOREA, *Herbert.*

Herb. in Bot. Reg. 1843, *Misc.* 85.—Botherbe, "*Steud.*," *Klatt in Linnæa*, xxxi. 562.—Roterbe, *Klatt in Flor. Bras.* iii. 543, tab. 71. fig. 4, *non Steud.*—Sisyrinchii sp., *Hook. etc.*

Perianthium regulare rotatum cæruleum vel flavum, tubo supra ovarium nullo, segmentis obovatis subconformibus, flore expanso patulis. *Stamina* 3 epigyna æquilateralia, filamentis liberis subulatis basi deltoideis, antheris ligulatis, connectivo angusto, post anthesin spiraliter tortis. *Ovarium* turbinatum triloculare, ovulis in loculo crebris; *stylus* brevis filiformis, ramis tribus subulatis apice stigmatoso sæpissime minute emarginatis. *Capsula* clavata membranacea apice operculata loculicide trivalvis, seminibus crebris triquetris, testa lucida nigra. *Herbæ bulbosæ americanæ tropicales, bulbi tunicis membranaceis brunneis, foliis linearibus vel teretibus, spathis paucis paucifloris pedunculatis, valvis membranaceis viridibus acutis lanceolatis vel linearibus, pedicellis sæpissime demum protrusis, floribus fugitivis successivis.*

* *Cæruleæ, styli ramis elongatis.*

1. C. SPECIOSA, *Herb. in Bot. Reg.* 1843, *Misc.* 65.—Sisyrinchium speciosum, *Hook. in Bot. Mag.* t. 3544.—S. xiphioides, *Pöppig, Fragm. Synops.* 7.—Botherbe bulbosa, *Klatt in Linnæa*, xxxi. 563 (*non* Roterbe bulbosa, *Steudel*). *Chili.*

2. C. CAMPESTRIS, *Baker in Trimen, Journ.* 1876, 187.—Botherbe campestris, *Klatt in Linnæa*, xxi. 563.—Roterbe campestris, *Klatt, Fl. Bras.* iii. 543. *Brasilia meridionalis et Monte Video.*

3. C. GARDNERI, *Baker in Trimen, Journ.* 1876, 188. *Brasilia in ditione Piauhy.*

4. C. TEXANA, *Baker in Trimen, Journ.* 1876, 188.—Gelasine? texana, *Herbert in Bot. Mag. sub* t. 3779. *Texas.*

** *Luteæ, styli ramis elongatis.*

5. C. LUTEOLA, *Baker in Trimen, Journ.* 1876, 188.—Botherbe luteola, *Klatt in Linnæa*, xxxi. 563.—Roterbe luteola, *Klatt in Fl. Bras.* iii. 544, tab. 71. fig. 4. *Brasilia meridionalis.*

6. C. FURCATA, *Baker in Trimen, Journ.* 1876, 188.—Nemostylis furcata, *Klatt in Linnæa,* xxxi. 560; *Fl. Bras.* iii. 515, t. 65. *Monte Video.*

*** *Cæruleæ, styli ramis brevissimis.*

7. C. NUDA, *Baker in Trimen, Journ.* 1876, 188.—Gelasine? nuda, *Herbert in Bot. Mag. sub* t. 3779.—Botherbe gracilis, *Klatt in Linnæa,* xxxi. 565.—Roterbe gracilis, *Klatt in Fl. Bras.* iii. 544. *Monte Video.*

8. C. PUNCTATA, *Baker in Trimen, Journ.* 1876, 188.—Gelasine punctata, *Herbert in Bot. Mag. sub* t. 3779. *Mexico.*

14. CARDIOSTIGMA, *Baker.*

Perianthium regulare cæruleum rotatum, tubo supra ovarium nullo, segmentis conformibus obovato-cuneatis obtusis flore expanso patulis. *Stamina* 3 æquilateralia epigyna, filamentis brevibus subulatis, antheris ligulatis luteis connectivo angusto. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis stamina superans, stigmatibus tribus planis obcordato-cuneatis margine fimbriatis. *Capsula* clavata apice operculata. *Herba bulbosa Mexicana, bulbi tunicis membranaceis brunneis, folio unico basali anguste lineari plicato, spathis solitariis terminalibus bifloris, valva exteriore longissima flores longe superante foliiformi, floribus fugitivis successivis.*

C. LONGISPATHA, *Baker.*—Gelasine longispatha, *Herbert in Benth. Pl. Hartweg.* 53.—Botherbe longispatha, *Klatt in Linnæa,* xxxi. 564.—Calydorea longispatha, *Baker in Trimen, Journ.* 1876, 188. *Mexico.*

15. NEMASTYLUS, *Nuttall.*

Nuttall in Amer. Phil. Trans. ser. nov. v. 157.—Eustylus, *Engel. & A. Gray, Pl. Lindh.* 28.—Ixiæ sp., *Bartram etc.*

Perianthium regulare rotatum cæruleum, tubo supra ovarium nullo, segmentis obovato-cuneatis obtusis subconformibus flore expanso patulis. *Stamina* 3 epigyna æquilateralia, filamentis brevissimis liberis basi valvatis deltoideis, antheris magnis ligulatis vel subpanduriformibus, connectivo angusto vel lato. *Ovarium* turbinatum, ovulis in loculo pluribus horizontalibus; *stylus* brevissimus filamentis æquilongus, ramis 6 subulatis patulis apice stigmatosis cæruleis. *Capsula* clavata apice operculata, seminibus crebris angulatis, testa brunnea. *Herbæ bulbosæ Americanæ boreales, bulbi tunicis membranaceis brunneis, foliis paucis petiolatis linearibus plicatis, spathis paucis paucifloris pedunculatis, valvis lanceolatis membranaceis viridibus acutis, pedicellis spatha æquilongis, floribus fugitivis successivis.*

Subgenus EUNEMASTYLUS. *Antheræ ligulatæ, connectivo angusto, post anthesin spiraliter tortæ.*

1. N. CŒLESTINUS, *Nuttall, loc. cit.*—Ixia cœlestina, *Bartr. Iter,* 152, t. 3.—Marica cœlestina, *Ker, Gen. Irid.* 19.—Beatonia cœlestina, *Klatt in Linnæa,* xxxi. 567. *Florida ad Carolinam.*

2. N. ACUTUS, *Herbert in Bot. Mag. sub* t. 3779.—Ixia acuta, *Bart. Flor. N. Amer.* i. 76.—N. geminiflora, *Nuttall, loc. cit. Arkansas et Texas.*

Subgenus EUSTYLUS (*Engel. & A. Gray*). *Antheræ subpanduriformes, connectivo lato, post anthesin rectæ.*

3. N. PURPUREUS, *Herbert in Bot. Mag. sub* t. 3779.—Eustylus purpureus, *Engel. & A. Gray, Pl. Lindh.* 27. *Texas et Louisiana.*

16. GALAXIA, *Thunb.*

Thunb. Nov. Gen. ii. 50, *cum icone*; *Ker, Gen. Irid.* 72; *Klatt in Linnæa,* xxxii. 782.

Perianthium regulare infundibulare, tubo cylindrico, limbo infundibulari, segmentis obovatis obtusis conformibus diu imbricatis et ascendentibus. *Stamina* 3, ad faucem tubi æquilateraliter inserta, filamentis sursum liberis deorsum in tubum cylindricum connatis, antheris ligulato-sagittatis basifixis. *Ovarium* oblongum, ovulis in loculo multis; *stylus* filiformis ex tubo protrusus, stigmate petaloideo peltato trilobato fimbriato. *Capsula* parva membranacea oblonga, seminibus multis globosis. *Herbæ bulbosæ Capenses, bulbi tunicis cancellatis apice fibrosis, caule supra terram nullo, foliis dense rosulatis angustis vel latis, floribus fugitivis cæruleis vel luteis in centro rosularum foliorum sessilibus, tubo ex spatha* 1–2-*valvi firma viridula ovato-lanceolata protruso.*

1. G. OVATA, *Thunb. loc. cit.*—Ixia Galaxia, *Linn. fil. Suppl.* 93. *C. B. Spei.*

Var. G. OBTUSA, *Salisb. in Trans. Hort. Soc.* i. 315.—G. ovata, *Andr.*

Bot. Rep. t. 94; *Jacq. Ic.* t. 291. fig. superior; *Thunb. icon. loc. cit. C. B. Spei.*

Var. G. GRANDIFLORA, *Salisb. in Trans. Hort. Soc.* i. 315; *Andr. Bot. Rep.* t. 164.—G. ovata, *Ker in Bot. Mag.* t. 1208. *C. B. Spei.*

Var. G. MUCRONULARIS, *Salisb. in Trans. Hort. Soc.* i. 315.—G. ovata, *Jacq. Ic.* t. 291. fig. inf. ad sinistram. *C. B. Spei.*

Var. G. VERSICOLOR, *Salisb. in Trans. Hort. Soc.* i. 315.—G. ovata, *Jacq. Ic.* t. 291. fig. inf. ad dextram.—G. violacea, *Eckl. Top. Verz.* 17. *C. B. Spei.*

2. G. GRAMINEA, *Thunb. loc. cit.*; *Jacq. Coll.* ii. t. 18. fig. 2; *Cav. Diss.* t. 189. fig. 3; *Ker in Bot. Mag.* t. 1292.—Ixia fugacissima, *Linn. fil. Suppl.* 94. *C. B. Spei.*

17. SPATALANTHUS, *Sweet.*

Sweet, Brit. Flow. Gard. t. 300.

Perianthium regulare infundibulare, tubo brevissimo infundibulari, segmentis oblongis acutis conformibus diu ascendentibus. *Stamina* 3 ad faucem tubo æquilateraliter inserta, filamentis in tubum brevem cylindricum prorsus coalitis, antheris ligulatis erectis basifixis. *Ovarium* globosum triloculare verrucosum, ovulis in loculo pluribus; *stylus* filiformis ex tubo protrusus, stigmatibus tribus ligulatis emarginatis. *Capsula* ignota. *Herba Capensis acaulis bulbosa, habitu omnino* Romuleæ, *bulbi tunicis fibrosis, foliis pluribus teretibus duris, floribus magnis solitariis speciosis pedunculatis terminalibus, spathæ valvis duabus lanceolatis firmis viridibus integris, perianthii segmentis more* Tulipæ *basi luteonigro maculatis.*

1. S. SPECIOSUS, *Sweet, loc. cit.*—Trichonema monadelphum, *Sweet, Hort. Brit.* edit. ii. 399. *C. B. Spei.*

18. HOMERIA, *Vent.*

Vent. Dec. Nov. Gen. No. 2; *Klatt in Linnæa,* 625.—Moreæ sp., *Thunb. etc.*

Perianthium regulare late infundibulare luteum vel miniatum, segmentis oblongis subconformibus obtusis vel acutis diu ascendentibus. *Stamina* 3 epigyna æquilateralia, filamentis in tubum cylindricum prorsus connatis, antheris ligulatis basifixis stigmatibus oppositis. *Ovarium* cylindricum 6-sulcatum, ovulis in loculo crebris; *stylus* filiformis columnæ filamentorum æquilongus, stigmatibus parvis ligulatis petaloideis apice cristis 2 deltoideis præditis. *Capsula* chartacea clavata 6-sulcata apice loculicide trivalvis, seminibus parvis crebris angulatis. *Herbæ bulbosæ Capenses, bulbi tunicis e basi in segmenta dura linearia nigra multa irregulariter imbricata sectis, foliis inferioribus elongatis anguste loratis duris nervatis bulbillis sæpe in axillis præditis, superioribus parvis bracteiformibus arcte imbricatis, spathis multis terminalibus multifloris, valvis duris angustis acutis arcte imbricatis, pedicellis elongatis, floribus magnitudine mediocribus successivis fugitivis.*

1. H. ELEGANS, *Sweet, Hort. Brit.* edit. ii. 498.—Moræa elegans, *Jacq. Hort. Schoen.* i. 6, t. 12.—Sisyrinchium elegans, *Willd. Sp. Plant.* i. 67.—M. spicata, *Ker in Bot. Mag.* t. 1283.—Homeria spicata, *Sweet, loc. cit.* *C. B. Spei.*

2. H. COLLINA, *Vent. Decad.* 5.—Moræa collina, *Thunb. Diss.* no. 13; *Jacq. Ic.* t. 226; *Ker in Bot. Mag.* t. 1033.—Sisyrinchium collinum, *Cav. Diss.* vi. 346; *Red. Lil.* t. 250.—S. elegans, *Red. Lil.* t. 171, *non Willd.*—Moræa grandiflora, *Eckl. Top. Verz.* 14. *C. B. Spei.*

Var. H. OCHROLEUCA, *Salisb. in Trans. Hort. Soc.* i. 308.—Moræa collina, var., *Ker in Bot. Mag.* t. 1103. *C. B. Spei.*

Var. H. MINIATA, *Sweet, Brit. Flow. Gard.* t. 152.—Moræa miniata, *Andr. Bot. Rep.* t. 404. *C. B. Spei.*

3. H. MACULATA, *Klatt in Linnæa*, xxxiv. 627. *C. B. Spei.*

4. H. LINEATA, *Sweet, Brit. Flow. Gard.* t. 178. *C. B. Spei.*

Var. H. PORRIFOLIA, *Sweet, Hort. Brit.* edit. ii. 498. *C. B. Spei.*

5. H. AURANTIACA, *Sweet, Hort. Brit.* edit. ii. 498.—Sisyrinchium aurantiacum, *Zuccag. in Rœm. & Schult. Syst. Veg.* i. 492.—Moræa collina, var. miniata minor, *Bot. Mag.* t. 1612. *C. B. Spei.*

19. FERRARIA, *Linn.*

Linn. Gen. no. 1818, ex parte; *Ker, Gen. Irid.* 27; *Klatt in Linnea*, xxxiv. 626.

Perianthium regulare, tubo supra ovarium nullo, segmentis ovato-lanceolatis distincte unguiculatis, unguibus in cupulam diu conniventibus, supra unguem margine undulatis flore expanso patulis vel reflexis. *Stamina* 3 epigyna, filamentis in tubum cylindricum coalitis, apice liberis, antheris oblongo-sagittatis. *Ovarium* cylindricum rostratum triloculare, ovulis in loculo crebris; *stylus* filiformis columnæ filamentorum subæquilongus; *stigmatibus* patulis petaloideis planis bifidis insigniter penicillatis. *Capsula* oblonga rostrata chartacea loculicide trivalvis, seminibus magnis crebris subglobosis, testa nigra. *Herbæ Capenses cormo magno tuberoso præditæ, foliis inferioribus paucis anguste loratis elongatis duris, caulibus dichotome ramosis foliis reductis multis ovato-lanceolatis amplexicaulibus bracteiformibus præditis, spathis magnis multifloris ventricosis valvis duris striatis oblongo-lanceolatis, pedicellis spatha brevioribus, floribus magnis fugitivis luride purpureis vel viridibus.*

* *Macroscyphæ, antherarum loculis divaricatis.*

1. F. FERRARIOLA, *Willd. Sp. Plant.* iii. 581.—Moræa Ferrariola, *Jacq. Hort. Schoen.* t. 456.—F. viridiflora, *Andr. Bot. Rep.* t. 285.—F. antherosa, *Ker in Bot. Mag.* t. 751.—F. minor, *Pers. Syn.* i. 50. *C. B. Spei.*

Var.? F. ANGUSTIFOLIA, *Sweet, Hort. Brit.* 499. *C. B. Spei.*

2. F. DIVARICATA, *Sweet, Brit. Flow. Gard.* t. 192. *C. B. Spei.*

** *Brachyscyphæ, antherarum loculis parallelis.*

3. F. UNDULATA, *Linn. Sp. Plant.* 1353; *Curt. Bot. Mag.* t. 144; *Red. Lil.* t. 28; *Jacq. Hort. Vind.* t. 63; *Cav. Ic.* t. 190. fig. 1.—Moræa undulata, *Thunb. Diss. Mor.* 14.—Ferraria punctata, *Pers. Syn.* i. 50; *Miller, Ic.* 187, t. 280. *C. B. Spei.*

4. F. UNCINATA, *Sweet. Brit. Flow. Gard.* t. 161. *C. B. Spei.*

5. F. OBTUSIFOLIA, *Sweet, Brit. Flow. Gard.* t. 148. *C. B. Spei.*

6. F. ATRATA, *Lodd. Bot. Cab.* t. 1356. *C. B. Spei.*

20. GELASINE, *Herbert.*

Herb. in Bot. Mag. t. 3779.

Perianthium regulare rotatum cæruleum, tubo supra ovarium nullo, segmentis obovato-cuneatis conformibus vel interioribus paulo minoribus. *Stamina* 3 æquilateralia epigyna, filamentis in tubum brevem prorsus connatis, antheris erecto-patentibus ligulatis basifixis. *Ovarium* turbinatum, ovulis in loculo multis crebris; *stylus* filiformis, ramis tribus erecto-patentibus subulatis. *Capsula* clavata apice operculata loculicide trivalvis, seminibus crebris angulatis, testa brunnea. *Herbæ bulbosæ Americanæ, bulbi tunicis brunneis membranaceis, foliis paucis linearibus plicatis, spathis paucis terminalibus pedunculatis multifloris, valvis lanceolatis acutis arcte imbricatis, pedicellis protrusis, floribus fugitivis successivis.*

1. G. AZUREA, *Herb. loc. cit. Banda orientalis.*

2. G. GRANDIFLORA, *Herb. loc. cit. Andes.*

3. G.? PURRUCHUCANA, *Herb. loc. cit. Andes.*

21. CHLAMYDOSTYLUS, *Baker.*

Baker in Trimen, Journ. 1876, 185.

Perianthium regulare rotatum cæruleum vel luteum, tubo supra ovarium nullo, segmentis obovatis obtusis conformibus flore expanso patulis. *Stamina* 3 æquilateralia epigyna, filamentis in tubum cylindricum prorsus connatis, antheris basifixis ligulatis connectivo angusto, vel panduriformibus connectivo lato. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* brevis filiformis erectus, ramis 6 subulatis apice stigmatosis. *Capsula* clavata membranacea operculata apice loculicide trivalvis, seminibus congestis angulatis, testa brunnea. *Herbæ bulbosæ Americæ tropicalis, bulbi tunicis brunneis membranaceis, foliis* 1–2 *teretibus vel anguste linearibus plicatis, caulibus simplicibus vel furcatis foliis* 1–2 *reductis præditis, spathis segregatis terminalibus paucifloris pedunculatis, valvis lanceolatis viridulis arcte imbricatis, pedicellis floriferis sæpe protrusis, floribus fugitivis successivis.*

Subgenus EUCHLAMYDOSTYLUS. *Antheræ ligulatæ, connectivo angusto.*

1. C. BRACTEOLATUS, *Baker.*—Beatonia bracteolata, *Klatt in Linnæa,* xxxiv. 733. *Andes Boliviæ.*

2. C. TENUIS, *Baker in Trimen, Journ.* 1876, 185.—Nemastylis cœlestina, *Klatt in Linnæa,* xxxi. 567, ex parte. *Mexico.*

3. C. MULTIFLORUS, *Baker in Trimen, Journ.* 1876, 186.—Moræa foliosa, *H. B. K. Nov. Gen.* i. 322? *Mexico et Andes.*

Subgenus PLATYSTERIGMA. *Antheræ subpanduriformes vel oblongæ, connectivo lato.*

4. C. TRIFLORUS, *Baker.*—Nemastylis triflora, *Herbert in Benth. Pl. Hartweg.* 95.—C. cernua, *Baker in Trimen, Journ.* 1876, 186. *Mexico et Guatemala.*

5. C. MEDUSA, *Baker, in Trimen, Journ.* 1876, 186. *Brasilia in ditione Goyaz.*

22. SCHIZOSTYLIS, *Backh. et Harv.*

Backh. et Harv. in Bot. Mag. t. 5422.

Perianthium regulare rotatum, tubo supra ovarium cylindrico, segmentis rotatis oblongis conformibus flore expanso patulis. *Stamina* 3 ad faucem tubi inserta æquilateralia limbo breviora, filamentis subulatis, antheris magnis linearibus. *Ovarium* oblongum triloculare, ovulis in loculo crebris; *stylus* filiformis ex tubo haud protrusus, stigmatibus tribus magnis erecto-patentibus subulatis integris. *Capsula* parva oblonga loculicide trivalvis, seminibus crebris triquetris. *Herbæ Capenses haud bulbiferæ, radicibus dense cæspitosis fibroso-carnosis, foliis radicalibus flabellato-distichis graminoideis, floribus dense æquilateraliter spicatis, spathis unifloris, valvis duabus integris viridulis lanceolatis vel oblongis. Ab* Hesperantha *vix recedit nisi defectu bulbi.*

1. S. COCCINEA, *Back. & Harv. loc. cit. Natal, Transvaal, Kaffraria.*

2. S. PAUCIFLORA, *Klatt in Linnæa,* XXXV. 380.—S. ixioides, *Harv. MS. Natal, Transvaal, &c.*

23. WITSENIA, *Thunb.*

Thunb. Nov. Gen. ii. 34, cum icone; *Ker, Gen.* 7, ex parte; *Klatt in Linnæa,* 34, 545, ex parte.—Antholyzæ sp., *Linn.*

Perianthium infundibulare regulare viridulum persistens, tubo supra ovarium elongato cylindrico e basi ad faucem sensim ampliato, segmentis 6 lingulatis diu ascendentibus, exterioribus supra medium dorso fulvo-tomentosis, interioribus apice solum fulvo-tomentosis. *Stamina* 3, ad faucem tubi æquilateraliter inserta, filamentis applanatis, antheris magnis lanceolatis æquilongis. *Ovarium* oblongum triloculare, ovulis in loculo crebris; *stylus* filiformis perianthio æquilongus apice stigmatoso obscure tricuspidatus. *Capsula* parva turbinata glabra castanea in spatha occulta, seminibus paucis imbricatis discoideis, testa brunnea. *Frutex ramosus, caulibus lignosis acute ancipitibus, foliis caulinis multis distichis duris linearibus nervosis amplexicaulibus rectis, spathis* 1–2-*floris multis spicatis congestis, valvis pluribus magnis duris lanceolatis acutis coriaceis viridulis, exterioribus sensim brevioribus.*

1. W. MAURA, *Thunb. loc. cit.*; *Lam. Ill.* t. 30; *Red. Lil.* t. 245 & 463; *Bot. Reg.* t. 5; *Maund, Bot.* t. 125; *Flore des Serres,* t. 72; *Paxt. Mag.* viii. 221, *cum icone*; *Reich. Exot.* t. 23.—W. tomentosa,

Salisb. in Trans. Hort. Soc. i. 312.—Ixia disticha, *Lam. Ency.* iii. 333.—Antholyza maura, *Linn. Mant.* 175. *C. B. Spei.*

24. NIVENIA, *Ventenat.*

Ventenat, Decad. Nov. Gen. no. 1 (1808), non *R. Br.* (1809). —Genlisea, *Reich. Conspect.* 60.—Witsenia, *Ker, Gen.* 7, ex parte.—Ixiæ sp., *Thunb.*

Perianthium hypocrateriforme regulare glabrum cæruleum, tubo supra ovarium cylindrico, segmentis 6 oblongis obtusis æqualibus flore expanso patulis. *Stamina* 3 ad faucem tubi æquilateraliter inserta, filamentis brevibus subulatis, antheris minutis oblongis. *Ovarium* triloculare, ovulis in loculo pluribus; *stylus* filiformis cæruleus perianthio æquilongus, apice obscure tricuspidatus. *Capsula* parva oblongo-turbinata coriacea glabra brunnea, ex apice ad basin loculicide trivalvis, seminibus in loculo paucis oblongis turgidis. *Frutices Capenses parvi ramosi, ramis acute ancipitibus, foliis multis caulinis distichis confertis duris linearibus acutis amplexicaulibus, spathis* 1–2-*floris parvis corymbosis vel capitatis, valvis exterioribus obtusis brunneis coriaceis, interioribus majoribus membranaceis, floribus cæruleis fugitivis.*

1. N. CORYMBOSA, *Baker.*—Witsenia corymbosa, *Gawl. in Bot. Mag.* t. 895; *Smith, Exot. Bot.* t. 18; *Red. Lil.* t. 453; *Lodd. Bot. Cab.* t. 254; *Reich. Exot.* t. 24; *Paxt. Mag.* iii. 269, *cum icone*; *Maund. Bot.* v. 202.—N. stylosa, *Salisb. in Trans. Hort. Soc.* i. 311. *C. B. Spei.*

2. N. FRUTICOSA, *Baker.*—Ixia fruticosa, *Thunb. Diss. Ixia,* No. 1, t. 1. fig. 3; *Lam. Ill.* i. 108, t. 31. fig. 4.—Witsenia fruticosa, *Ker in König & Sims, Ann.* i. 237.—W. capitata, *Klatt in Linnæa,* xxxiv. 546.—W. ramosa, *Vahl, Enum.* ii. 47.—Aristea fruticosa, *Pers. Syn.* i. 41. *C. B. Spei.*

25. KLATTIA, *Baker.*

Witseniæ sp., *Ker.*

Perianthium cylindricum persistens cæruleum glabrum, tubo supra ovarium brevi cylindrico, segmentis 6 æqualibus longissimis diu ascendentibus apice anguste ligulatis, deorsum ungue elongato subulato præditis. *Stamina* 3 ad faucem tubi æquilateraliter inserta limbo paulo breviora, filamentis elongatis subulatis, antheris magnis ligulatis basifixis. *Ovarium* oblongum triloculare, ovulis in loculo pluribus crebris; *stylus* filiformis limbo æquilongus, apice stigmatoso minute tricuspidatus. *Capsula* parva oblonga glabra brunnea coriacea loculicide trivalvis, seminibus pluribus turgidis. *Frutex ramosus Capensis, habitu* Niveniæ, *ramis lignosis acute ancipitibus, foliis caulinis confertis distichis linearibus duris amplexicaulibus, floribus dense capitatis, glomerulis foliis reductis lineari-navicularibus magnis bracteatis, spathis singulis multo minoribus occultis* 1–2-*floris, valvis parvis scariosis inæqualibus lanceolatis.*

1. K. PARTITA, *Baker.*—Witsenia partita, *Ker in König & Sims, Ann.* i. 237. *C. B. Spei.*

26. ARISTEA, *Soland.*

Soland. in Ait. Hort. Kew. i. 67; *Ker, Gen. Irid.* 10; *Klatt in Linnæa,* xxxiv. 548.—Moræææ sp., *Thunb.*—Ixiæ sp., *Linn.*—Sisyrinchium *et* Wredowia, *Eckl. Topog. Verz.* 16—Cleanthe, *Salisb. in Trans. Hort. Soc.* i. 312.

Perianthium regulare rotatum cæruleum, tubo supra ovarium subnullo, segmentis conformibus vel in *Cleanthe* interioribus majoribus obovatis vel oblongis flore expanso patulis. *Stamina* 3 ad faucem æquilateraliter inserta, limbo multo breviora, filamentis subulatis, antheris ligulatis basifixis. *Ovarium* clavatum, triloculare, ovulis in loculo pluribus crebris; *stylus* filiformis, ex tubo longe protrusus rectus vel leviter declinatus, summo apice obscure tricuspidatus. *Capsula* oblonga vel cylindrica, dura, coriacea, sæpissime acute triquetra, seminibus discoideis vel globosis, testa castanea vel atrata. *Herbæ perennes Capenses et Africanæ tropicales, rhizomate brevi lignoso, fibris radicalibus copiosis duris gracilibus, foliis basalibus multis elongatis distichis duris linearibus vel subteretibus, caulinis pluribus reductis, inflorescentia corymboso-paniculata vel interdum spicata vel capitata, spathis oblongis multifloris ventricosis, valvis permultis imbricatis omnibus scariosis vel exterioribus viridulis, floribus fugitivis cæruleis post anthesin spiraliter tortis, capsulis in spatha sessilibus vel pedicellatis protrusis.*

Series I. EUARISTEA. *Perianthii segmenta conformia.*

* *Capsula parva sessilis obovoidea, lateribus rotundatis, seminibus globosis.*

1. A. ANCEPS, *Ecklon*; *Klatt in Linnæa,* xxxiv. 550. *C. B. Spei et Abyssinia.*

2. A. MADAGASCARIENSIS, *Baker in Trimen, Journ.* 1876, 267. *Madagascaria.*

3. A. SCHIZOLÆNA, *Harv. MS.*; *Baker in Trimen, Journ.* 1876, 267. *C. B. Spei.*

4. A. ANGOLENSIS, *Baker.* *Angola.*

** *Capsula oblonga acute triquetra breviter pedicellata, seminibus discoideis.*

5. A. JUNCIFOLIA, *Baker in Trimen, Journ.* 1876, 267. *C. B. Spei.*

6. A. RACEMOSA, *Baker in Trimen, Journ.* 1876, 267.—Witsenia spicata, *E. Meyer in Herb. Drege.* *C. B. Spei.*

7. A. DICHOTOMA, *Ker, Gen. Irid.* 13, *non Klatt.*—Moræa dichotoma, *Thunb. Fl. Cap.* i. 266.—A. intermedia, *Ecklon, Top. Verz.* 16. *C. B. Spei.*

8. A. CYANEA, *Soland. in Ait. Hort. Kew.* i. 67; *Andr. Bot. Rep.* t. 10; *Curt. in Bot. Mag.* t. 458; *Red. Lil.* t. 462.—Ixia africana, *Linn. Sp. Plant.* 51.—Moræa africana, *Thunb. Diss. Mor.* No. 3.—M. Aristea, *Lam. Ill.* 114.—Aristea eriophora, *Pers. Syn.* i. 41. *C. B. Spei.*

9. A. COMPRESSA, *Buching. in Krauss, Pl. Natal. Exsic.* No. 358. *Natalia.*

10. A. CAPITATA, *Ker in Bot. Mag.* t. 605 (*excl. syn.*).—Gladiolus capitatus, *Linn. Sp. Plant.* 53.—Aristea major, *Andr. Bot. Rep.* t. 160. Moræa cærulea, *Thunb. Diss. Mor.* 15, tab. 2. fig. 2.—A. cærulea, *Vahl, Enum.* ii. 124.—A. spicata *et* bracteata, *Pers. Syn.* i. 41. *C. B. Spei.*

*** *Capsula cylindrico-triquetra, seminibus minutis turgidis.*

11. A. SPIRALIS, *Ker in König & Sims, Ann.* i. 236.—Moræa spiralis, *Linn. Suppl.* 99; *Bot. Mag.* t. 520.—Sisyrinchium spirale, *Eckl. Top. Verz.* 16. *C. B. Spei.*

12. A. PUSILLA, *Ker in König & Sims, Ann.* i. 236; *Bot. Mag.* t. 123. —Moræa pusilla, *Thunb. Diss.* No. 4.—Sisyrinchium pusillum, *Eckl.* *C. B. Spei.*

13. A. ECKLONI, *Baker.*—A. dichotoma, *Eckl.*; *Klatt in Linnæa,* xxxiv. 551, *non Ker. C. B. Spei.*

Series II. CLEANTHE. *Perianthii segmenta interiora majora.*

14. A. MELALEUCA, *Ker in König & Sims, Ann.* i. 236; *Bot. Mag.* t. 1277.—Moræa melaleuca, *Thunb. Diss. Moræa,* No. 1, t. 1. fig. 3. —M. lugens, *Linn. fil. Suppl.* 99.—Cleanthe melaleuca, *Salisb. Trans. Hort. Soc.* i. 312.—Sisyrinchuim melaleucum *et* inundatum, *Eckl. Top. Verz.* 16. *C. B. Spei.*

Indescripta, mihi ignota.

15. A. WREDOWIA, *Steud. Nomencl.* edit. ii. 130.—W. pulchra, *Eckl. Topog. Verz.* 16. *C. B. Spei.*

27. ORTHROSANTHUS, *Sweet.*

Sweet, Fl. Austral. t. 12; *Benth. Fl. Austral.* vi. 410.—Sisyrinchii sp., *Lindl.* &c.—Moræ sp., *H. B. K.*

Perianthium regulare infundibulare cæruleum, tubo supra ovarium brevi vel brevissimo, segmentis 6 oblongis conformibus imbricatis. *Stamina* 3 ad faucem tubi æquilateraliter inserta, filamentis brevibus linearibus, antheris ligulatis. *Ovarium* oblongum triloculare, ovulis in loculo multis crebris; *stylus* brevis filiformis, e tubo haud protrusus, stigmatibus tribus erecto-patentibus subulatis integris, antheris alternis. *Capsula* chartacea oblongo-triquetra loculicide trivalvis, seminibus minutis angulatis, testa brunnea. *Herbæ perennes, rhizomate brevi lignoso, fibris radicalibus duris, foliis radicalibus multis distichis linearibus duris persistentibus, caulinis paucis similibus reductis, spathis oblongis multifloris spicatis vel paniculatis, valvis perplurimis, imbricatis, exterioribus viridibus, interioribus membranaceis, capsulis intra spathas inclusis subsessilibus vel breviter pedicellatis, floribus parvis fugitivis.*

* *Australienses.*

1. O. MULTIFLORUS, *Sweet. loc. cit.*; *Lodd. Bot.* t. 1474.—Sisyrinchium cyaneum, *Lindl. Bot. Reg.* t. 1090.—Libertia stricta, *Endl. in Pl. Preiss.* ii. 32? *Australia australis et occidentalis.*

2. O. MUELLERI, *Benth. Fl. Austral.* vi. 411. *Australia occidentalis.*

3. O. LAXUS, *Benth. Fl. Austral.* vi. 411.—Libertia laxa, *Endl. in Pl. Preiss.* ii. 32. *Australia occidentalis.*

4. O. GRAMINEUS, *Benth. Fl. Austral.* vi. 411.—Libertia graminea, *Endl. in Pl. Preiss.* ii. 32. *Australia occidentalis.*

5. O. POLYSTACHYUS, *Benth. Fl. Austral.* vi. 411. *Australia occidentalis.*

** *Americanæ.*

6. O. SPICATUS, *Baker.*—Sisyrinchum spicatum, *Seubert, MS.*; *Klatt in Linnæa,* xxxi. 377. *Brasilia meridionalis.*

7. O. CHIMBORACENSIS, *Baker in Gard. Chron.* 1876, ii. 67.—Moræa chimboracensis et acorifolia, *H. B. K. Nov. Gen.* i. 322.—Sisyrinchium Moritzianum, *Klatt in Linnæa,* xxxi. 378.—Orthrosanthus Moritzianus, *Klotzch in Moritz, Exsic.* No. 1204. *Andes, ab Mexico ad Peruviam.*

Var. GLADIOLOIDES, *Baker.*—Moræa gladioloides, *H. B. K. Nov. Gen.* i. 322.—Sisyrinchium occisapungum, *Ruiz, MS.*; *Klatt in Linnæa,* xxxi. 379. *Andes.*

28. BELEMCANDA (*Rheede*).

Adans. Fam. ii. 60.—Pardanthus, *Ker in König et Sims, Ann.* i. 246.—Ixiæ sp., *Linn.*

Perianthium rotatum, subregulare, tubo supra ovarium nullo, segmentis oblongo-oblanceolatis unguiculatis flore expanso patulis, interioribus paulo minoribus, post anthesin spiraliter tortis. *Stamina* 3 epigyna limbo breviora æquilateraliter inserta, filamentis subulatis, antheris ligulatis basifixis. *Ovarium* triloculare clavatum, ovulis in loculo crebris; *stylus* filiformis, stigmatibus 3 erecto-patentibus applanatis apice reniformibus. *Capsula* magna coriacea oblongo-turbinata loculicide trivalvis, seminibus crebris globosis magnitudine pisi, testa crassa nigra, albumine corneo. *Herba asiatica orientalis, habitu* Iridis, *rhizomate crasso, foliis multis magnis distichis ensiformibus, caulinis similibus sensim minoribus, inflorescentia copiose dichotome corymbosa, spathis parvis multifloris, valvis multis oblongis scariosis, pedicellis protrusis apice articulatis, floribus speciosis fugitivis punctatis.*

1. B. CHINENSIS, *Leman in Red. Lil.* t. 121.—B. punctata, *Moench Meth.* 529.—Ixia chinensis, *Linn. Sp. Plant.* 52; *Trew, Ehret.* 23, t. 52; *Curt. in Bot. Mag.* t. 171.—Pardanthus chinensis, *Ker in König & Sims, Ann.* i. 246; *Flore des Serres,* t. 1632.—P. nepalensis, *Sweet, Brit. Flow. Gard.* edit. ii. 498. *Asia orientalis.*

29. Bobartia, *Linn.*

Linn. Gen. no. 71; *Ker, Ann. Irid.* 29; *Klatt in Linnea,* xxxiv. 554.—Moræ sp., *Thunb. Diss. Moræa.*

Perianthium regulare rotatum flavum, tubo supra ovarium nullo, segmentis oblongis conformibus flore expanso patulis. *Stamina* 3 æquilateralia epigyna, filamentis brevissimis applanatis, antheris ligulatis. *Ovarium* turbinatum, ovulis in loculo pluribus; *stylus* brevissimus, stigmatibus tribus falcatis subulatis integris antheris alternis. *Capsula* dura turbinata 6-sulcata operculata, apice loculicide trivalvis, seminibus crebris magnis angulatis obscure alatis, testa nitida castanea, albumine corneo. *Herbæ Capenses altæ perennes rhizomatosæ, foliis duris persistentibus teretibus planis interdum rudimentariis, scapis aphyllis teretibus vel planis, spathis multis cylindricis in rosulam unicam densam congestis, valvis cartilagineis linearibus acuminatis viridibus arcte imbricatis, floribus aggregatis fugitivis successivis, pedicellis ac spatha æquilongis.*

1. B. aphylla, *Ker, Gen. Irid.* 30.—Marica aphylla, *Ker in Bot. Reg.* sub t. 229.—Moræa aphylla, *Linn. fil. Suppl.* 99; *Thunb. Diss. Moræa,* No. 9, tab. 2. fig. 1.—Sisyrinchium aphyllum, *Spreng. Syst. Veg.* i. 166. *C. B. Spei.*

2. B. filiformis, *Ker, Gen. Irid.* 30.—Marica filiformis, *Ker in Bot. Reg.* sub t. 229.—Moræa filiformis, *Linn. fil. Suppl.* 100; *Thunb. Diss. Moræa,* No. 10, tab. 2. fig. 2.—Sisyrinchum filiforme, *Spreng. Syst. Veg.* i. 166. *C. B. Spei.*

3. B. gladiata, *Ker, Gen. Irid.* 30.—Ixia gladiata, *Linn. fil. Supp.* 93.—Marica gladiata, *Ker in Bot. Reg.* t. 229.—Moræa gladiata, *Thunb. Diss. Moræa,* No. 8.—Sisyrinchium gladiatum, *Spreng. Syst. Veg.* i. 166. *C. B. Spei.*

4. B. spathacea, *Ker, Gen. Irid.* 30.—Moræa spathacea, *Thunb. Diss. Moræa,* No. 11, tab. 1. fig. 1.—Marica spathacea, *Ker, Bot. Reg.* sub t. 229.—Bobartia indica, *Linn. Sp. Plant.* 78 (patria falsa).—Sisyrinchium spathaceum, *Pers. Syn.* i. 50.—Aristea spathacea, *Spreng. Syst. Veg.* i. 158.—Xyris altissima, *Lodd. Bot. Cab.* t. 1900 (patria falsa).—Bobartia juncea, *Salisb. in Trans. Hort. Soc.* i. 313. *C. B. Spei.*

30. Tapeinia, *Juss.*

Juss. Gen. 59.

Perianthium regulare infundibulare, tubo supra ovarium nullo, segmentis subconformibus oblongo-lanceolatis flore expanso falcatis. *Stamina* 3 ad basin segmentorum æquilateraliter inserta, filamentis basi connatis, supra medium liberis subulatis, antheris lanceolatis profunde sagittatis. *Ovarium* oblongum triloculare, ovulis in loculo plurimis; *stylus* filiformis, ramis tribus subulatis falcatis integris. *Capsula* globosa coriacea loculicide trivalvis, seminibus plurimis turgidis. *Herba perennis perpusilla glabra dense cæspitosa, foliis distichis linearibus, scapis brevissimis, floribus solitariis terminalibus, spathæ valvis oppositis duabus lanceolato-navicularibus firmis.*

1. T. MAGELLANICA, *Ker, Gen. Irid.* 9.—Ixia magellanica, *Lam. Ill.* i. 109.—Moræa magellanica, *Willd. Sp. Plant.* i. 241.—Witsenia magellanica, *Pers. Syn.* i. 42.—Ixia pumila, *Forst. Comm. Gott.* ix. 20, t. 8.—Witsenia pumila, *Vahl, Enum.* ii. 48.—Sisyrinchium pumilum, *Hook. fil. Fl. Ant.* t. 129.—Echthronema pumilum, *Herb. in Bot. Reg.* 1843, *Misc.* 85.—Galaxia obscura, *Cav. Diss.* t. 189. fig. 4. Sisyrinchium frigidum, *Pöpp. Fragm.* 1. *Chili et Patagonia.*

31. SISYRINCHIUM, *Linn.*

Linn. Gen. No. 1017; *Klatt in Linnæa,* xxxi. 63, 371, excl. sp. —Bermudiana (*Tourn.*), *Adans. Fam.* 60.—Souza, *Vellozo, Fl. Flum.* vii. t. 1–3.—Marica, *Ker, Gen. Irid.* 16, ex parte.—Syorhynchium, *Hoffmann, Nach.* ii. 216.—Hydastylus, *Salisb. in Trans. Hort. Soc.* i. 310.—Echthronema, Eriphlema, *et* Glumosia, *Herbert in Bot. Reg.* 1843, *Misc.* 85.

Perianthium regulare infundibulare vel hypocrateriforme, tubo supra ovarium nullo, segmentis conformibus oblongis vel lanceolatis acutis vel obtusis mucronatis e basi patulis vel basi diu in cupulam conniventibus. *Stamina* 3 ad basin segmentorum æquilateraliter inserta, filamentis basi vel prorsus coalitis, antheris oblongis basifixis. *Ovarium* triloculare, ovulis in loculo crebris; *stylus* filiformis, ramis stigmatosis tribus subulatis falcatis integris, antheris alternis. *Capsula* parva oblonga vel subglobosa membranacea loculicide trivalvis, seminibus crebris minutis triquetris, testa brunnea, albumine corneo. *Herbæ annuæ vel perennes haud bulbiferæ, radicibus fibrosis, foliis siccis anguste linearibus vel teretibus, caulibus nudis vel parce foliatis ancipitibus vel teretibus, spathis multifloris sæpe solitariis vel paucis pedunculatis, valvis lanceolato-navicularibus, exterioribus* *viridibus, interioribus membranaceis, floribus fugitivis successivis luteis vel cæruleis vel rubellis, pedicellis demum cum spatha subæquilongis.*

Sectio I. ANDROSOLEN, *Klatt (vix Lemaire*). Caules nudi teretes. Spathæ solitariæ vel plures terminales segregatæ pedunculatæ.*

1. S. NUNO, *Bertero; Colla in Mem. Taur.* xxxix. 17, t. 54. *Chili.*

Var. S. LEUCANTHUM, *Colla, loc. cit.*—S. depauperatum, *Philippi in Linnæa,* xxix. 61.—S. Berteroanum, *Phil. in Linnæa,* xxix. 58. *Chili.*

2. S. SETACEUM, *Klatt in Linnæa,* xxxi. 85; *Fl. Bras.* iii. 540, tab. 71. fig. 1. *Monte Video.*

3. S. GRANDIFLORUM, *Douglas in Bot. Reg.* t. 1364; *Bot. Mag.* t. 3599; *Sweet. Brit. Flow. Gard.* ser. ii. t. 388, *non Cav.*—S. Douglasii, *Dietr. Synops.* i. 150; *Lemaire in Flore des Serres,* t. 146.—Eriphlema grandiflorum, *Herb. in Bot. Reg.* 1843, *Misc.* 85. *Montes Scopulosi, Columbia britannica, California.*

4. S. TRINERVE, *Baker in Trimen, Journ.* 1876, 267. *Andes Boliviæ.*

5. S. JUNCEUM, *E. Meyer in Rel. Haenk.* i. 118.—S. roseum, *Philippi, in Linnæa,* xxix. 59. *Chili, Peru, Bolivia.*

Var. S. GRACILE, *Philippi in Linnæa,* xxix. 58. *Chili.*

Var. S. SCIRPIFORME, *Pöppig, Frag.* 22.—S. roseum, *Herb. in Bot. Reg.* 1843, *Misc.* 84.—S. scirpeum, *Philippi in Linnæa,* xxix. 59.—S. floribundum, *Philippi in Linnæa,* xxix. 59.—S. junceum, *Knowles & Westcott, Floral Cab.* iii. 17, t. 95. *Chili.*

Var. S. COLCHAGUENSE, *Philippi in Linnæa,* xxxiii. 253. *Chili.*

Var. S. ASPERULUM, *Philippi in Linnæa,* xxxiii. 252. *Chili.*

6. S. PHILIPPII, *Klatt in Linnæa,* xxxi. 89.—S. scabrum, *Philippi in Linnæa,* xxix. 58, *non Cham. & Schlecht. Andes Chilenses.*

7. S. FILIFOLIUM, *Gaudich. Voy. Freyc.* 133; *Hook. fil. Fl. Ant.* ii. 352, tab. 126.—S. Gaudichaudii, *Dietr. Sp. Plant.* ii. 505. *Insulæ Falkland, Fuegia.*

Sectio II. SISYRINGIUM, *Klatt. Caules ancipites nudi vel foliati. Spathæ solitariæ vel plures terminales segregatæ pedunculatæ.*

* *Perianthium cæruleum.*

8. S. SECUNDIFLORUM, *Klatt in Linnæa,* xxxi. 91; *Fl. Bras.* iii. 541. t. 71. fig. 2. *Brasilia.*

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* *Androsolen,* Lemaire = *Sisyrinchium,* Herbert, stirps filamentis prorsus connatis. *Sisyringium,* Lemaire, *Hydastylus,* Salisb., *Echthronema, Eriphlema* et *Glumosia,* Herb., sunt stirpes filamentis basi solum connatis.

9. S. AVENACEUM, *Klatt in Linnæa*, xxxi. 373. *Brasilia.*

10. S. SCABRUM, *Cham. & Schlecht. in Linnæa*, vi. 57.—S. multicaule, *Schauer in Linnæa*, xix. 704.—S. Berteroi, *Steud. in Lechler, Pl. Chil.* No. 290.—S. Lechleri, *Steud. in Lechler, Pl. Chil.* No. 288. *America tropicalis.*

11. S. CHILENSE, *Hook. in Bot. Mag.* t. 2786. *Chili, Monte Video, Brasilia meridionalis.*

12. S. BERMUDIANUM, *Linn. Sp. Plant.* 1353; *Cav. Diss.* t. 192. fig. 1; *Red. Lil.* t. 149.—Marica Bermudiana, *Ker, Gen. Irid.* 21.—S. Nuttalii, *Sweet, Brit. Flow. Gard.* edit. 2, 498.—S. excisum, *Godr. Fl. Juv.* 39? *America borealis, Bermuda, Hibernia, Mauritius, et Australia* (*inquilinum*).

Var. 1. S. IRIDIOIDES, *Curt. in Bot. Mag.* t. 94; *Dill. Elth.* 48, t. 41. fig. 48. *Bermuda.*

Var. 2. S. GRAMINEUM, *Curt. in Bot. Mag.* t. 464; *Red. Lil.* t. 282. *America borealis.*

Var. 3. S. GENICULATUM, *Herb. in Bot. Reg.* 1843, *Misc.* 84.—S. minus, *Engel & A. Gray, Pl. Lindh.* 55. *Texas.*

Var. 4. S. ANCEPS, *Cav. Diss.* vi. 345, t. 190. fig. 2; *Lodd. Bot. Cab.* t. 1220; *Eng. Bot.* edit. 3, t. 1491.—Marica anceps, *Ker, Gen. Irid.* 22; *Dill. Elth.* 49, t. 41. fig. 49. *America borealis, Hibernia.*

Var. 5. S. MUCRONATUM, *Mich. Fl. Amer. Bor.* ii. 33.—Marica mucronata, *Ker, Gen. Irid.* 22. *America borealis.*

** *Perianthium rubrum.*

13. S. MINUTIFLORUM, *Klatt in Linnæa*, xxxi. 71. *Monte Video.*

*** *Perianthium flavum.*

† *Acaules.*

14. S. PUSILLUM, *H. B. K. Nov. Gen.* i. 323.—Marica pusilla, *Ker, Gen. Irid.* 24. *Andes Columbiæ.*

15. S. BOGOTENSE, *H. B. K. Nov. Gen.* i. 323.—Marica bogotensis, *Ker, Gen. Irid.* 23. *Andes, Brasilia.*

16. S. JAMESONI, *Baker in Trimen, Journ.* 1876, 269. *Andes Columbiæ et Boliviæ.*

17. S. UNISPATHACEUM, *Klatt in Linnæa*, xxxiv. 737. *Andes Boliviæ.*

18. S. PATAGONICUM, *Philippi, MS.* *Patagonia.*

19. S. CALIFORNICUM, *Dryand. in Hort. Kew.* edit. 2, iv. 135.—Marica californica, *Ker in Bot. Mag.* t. 983.—Hydastylus californicus, *Salisb. in Trans. Hort. Soc.* i. 310.—Echthronema californica, *Herbert in Bot. Reg.* 1843, *Misc.* 84.—Sisyrinchium lineatum, *Torrey in Bot. Whipple,* 143.—S. flavidum, *Kellogg in Proc. Calif. Acad.* ii. 50, t. 3. *California.*

20. S. ACRE, *H. Mann in Proc. Amer. Acad.* vii. 206. *Insulæ Sandivicences.*

21. S. TINCTORIUM, *H. B. K. Nov. Gen.* i. 324.—Marica tinctoria, *Ker, Gen. Irid.* 23.—S. tingens, *Steud. Nomen. Bot.* edit. ii. 596.—S. rigidum, *Lehm. in Otto, Neue deutsche Gartenzeit.* vi. 415. *Andes.*

†† *Caulescentes.*

22. S. MICRANTHUM, *Cav. Diss.* vi. 144, t. 191. fig. 2; *Ker in Bot. Mag.* t. 2116.—Marica micrantha, *Ker, Gen. Irid.* 22.—S. micranthemum, *Pers. Syn.* i. 50. *America tropicalis, Australia orientalis* (*inquilinum*).

23. S. GRACILE, *Klotzsch, MS. Brasilia.*

24. S. CONVOLUTUM, *Nocca, Pl. Select.* i. t. 1; *Red. Lil.* t. 47; *Willd. Hort. Berol.* t. 91.—Echthronema convoluta, *Herb. in Bot. Reg.* 1843, *Misc.* 84.—Marica acorifolia, *Ker, Gen. Irid.* 24, excl. syn. *America tropicalis.*

25. S. PEARCEI, *Philippi in Linnæa,* xxxiii. 251. *Chili.*

26. S. IRIDIFOLIUM, *H. B. K. Nov. Gen.* i. 324; *Lodd. Bot. Cab.* t. 1979.—Marica iridifolia, *Ker in Bot. Reg.* t. 646.—S. laxum, *Otto in Bot. Mag.* t. 2312. *America tropicalis, Chili.*

27. S. TENUIFOLIUM, *Willd. Hort. Berol.* t. 92; *Red. Lil.* t. 275; *Bot. Mag.* t. 2117 et 2313.—Marica tenuifolia, *Ker, Gen. Irid.* 23.—Echthronema tenuifolia, *Herb. in Bot. Reg.* 1843, *Misc.* 84. *Mexico.*

28. S. MANDONI, *Baker in Trimen, Journ.* 1876, 269. *Andes Boliviæ et Columbiæ.*

29. S. GRAMINIFOLIUM, *Lindl. in Bot. Reg.* t. 1067.—Echthronema graminifolium, *Herb. in Bot. Reg.* 1843, *Misc.* 85.—S. majale, *Link, Klotzsch, & Otto. Ic.* t. 10. *Chili.*

Var. 1. S. MACULATUM, *Hook. in Bot. Mag.* t. 3197.—Echthronema maculata, *Herb. in Bot. Reg.* 1843, *Misc.* 85. *Chili.*

Var. 2. S. ASCENDENS, *Pöppig, Fragm.* 4.—S. graminifolium, var. pumilum, *Lindl. in Bot. Reg.* t. 1915.—S. dasycarpum, *Philippi, MS. Chili.*

30. S. HARTWEGII, *Baker. Mexico.*

31. S. PACHYRHIZUM, *Baker in Trimen, Journ.* 1876, 269.—S. Sellowii, *Klotzsch, MS.*, non S. Sellowanum, *Klatt. Brasilia meridionalis.*

32. S. RESTIOIDES, *Spreng. Syst.* i. 167. *Brasilia meridionalis, Monte Video.*

33. S. VAGINATUM, *Spreng. Syst.* i. 166.—S. sulcatum, *Gillies in Hook. Ic.* t. 218. *Brasilia meridionalis, Monte Video.*

34. S. INCURVATUM, *Gard. in Hook. Ic.* t. 513.—S. brevifolium, *Klotzsch, MS. Brasilia.*

35. S. GLAZIOVII, *Baker in Trimen, Journ.* 1876, 278.—Souza Comes, *Velloz, Fl. Flum.* vii. 2?—Sisyrinchium Comes, *Steud. Nomenc.* edit. ii. 595? *Brasilia meridionalis.*

36. S. ALATUM, *Hook. Ic.* t. 219.—Souza Marchio, *Velloz, Fl. Flum.* vii. t. 1.—Sisyrinchium Marchio, *Steud. Nomenc.* edit. ii. 596. *America tropicalis.*

Var. PAUCIFOLIUM, *Baker. America tropicalis.*

37. S. WEIRII, *Baker in Trimen, Journ.* 1876, 268. *Brasilia meridionalis.*

Sectio III. CEPHALANTHUM, *Baker. Caules nudi. Spathæ plures sessiles in caput unicum congestæ.*

* *Caulis teres.*

38. S. LUZULA, *Klotzsch*; *Klatt in Linnæa,* xxxi. 89, 376. *Brasilia meridionalis.*

39. S. LATERALE, *Baker in Trimen, Journ.* 1876, 269. *Andes Boliviæ.*

40. S. FASCICULATUM, *Klatt in Linnæa,* xxxi. 97. *Monte Video.*

** *Caulis anceps.*

41. S. SELLOWIANUM, *Klatt in Linnæa,* xxxi. 375; *Fl. Bras.* iii. 359, tab. 70. fig. 2. *Monte Video.*

42. S. MARGINATUM, *Klatt in Linnæa,* xxxi. 83. *Brasilia meridionalis.*

43. S. PALMIFOLIUM, *Linn. Mant.* 122, excl. syn.—Glumosia palmifolia, *Herb. in Bot. Reg.* 1843, *Misc.* 85.—Marica palmifolia, *Ker, Gen. Irid.* 20.—Moræa palmifoila, *Thunb. Diss.* No. 6.—S. racemo-

sum, *Pers. Syn.* i. 49.—Moræa alata, *Vahl, Enum.* i. 154.—S. macrocephalum, *Grah. in Edinb. New Phil. Journ.* 1833, 176.—S. altissimum, *Tenore, Atti della terz. riun.* 504.—S. elatum, *Seubert, MS. Brasilia meridionalis, Monte Video.*

Var. S. CONGESTUM, *Klatt in Linnæa,* xxxi. 98. *Brasilia meridionalis.*

Sectio IV. SPATHIRACHIS, *Klatt,* ex parte. *Caules foliati. Spathæ plures segregatæ spicatæ, laterales sessiles.*

44. S. MONOSTACHYUM, *Baker in Trimen, Journ.* 1876, 268. *Monte Video.*

45. S. SESSILIFLORUM, *Pöppig, Fragm.* 2.—S. Huismo, *Dombey, MS. Chili.*

46. S. CUSPIDATUM, *Pöppig, Fragm.* 3.—S. adenostemon, *Philippi in Linnæa,* xxix. 63.—S. flexuosum, *Lindl. Bot. Reg.* sub t. 1067, *non Spreng.*—S. arenarium, *Pöppig, Fragm.* 3. *Andes Boliviæ, Mendozæ, et Chilenses.*

47. S. STRIATUM, *Smith, Icon. Pict.* t. 9; *Red. Lil.* t. 66; *Kerner, Hort.* t. 23.—Marica striata, *Ker in Bot. Mag.* t. 701.—S. spicatum, *Cav. Diss.* t. 104.—Moræa sertata, *Jacq. Hort. Schoen.* t. 11.—S. lutescens, *Lodd. Bot. Cab.* t. 1870.—S. nigricans, *C. Gay, Fl. Chil.* vi. 20. *Chili, Mendoza.*

48. S. NERVOSUM, *Philippi in Linnæa,* xxxiii. 251. *Chili.*

32. SOLENOMELUS, *Miers.*

Miers in Trans. Linn. Soc. xix. 95, t. 8.—Symphyostemon, *Miers in Trans. Linn. Soc.* xix. 97.—Cruckshankia, *Miers, Travels,* ii. 259, *non Hook.*—Psithyrisma, *Herb. in Bot. Reg.* 1843, *Misc.* 84.—Lechlera, *Griseb. in Lechl. Pl. Chil. Exsic.* no. 2966.—Susarium, *Philippi in Linnæa,* xxxiii. 248.—Chamælum, *Philippi in Linnæa,* xxxiii. 250.

Perianthium regulare infundibulare, tubo supra ovarium distincte producto filiformi vel infundibulari recto vel curvato, segmentis conformibus oblongis vel lanceolatis flore expanso falcatis. *Stamina* 3 ad faucem tubi æquilateraliter inserta, filamentis in tubum prorsus connatis, antheris parvis oblongis basifixis. *Ovarium* triloculare, ovulis in loculo pluribus; *stylus* filiformis, ramis tribus brevibus subulatis falcatis integris. *Capsula* oblonga membranacea loculicide trivalvis, seminibus in loculo copiosis minutis triquetris, testa membranacea brunnea. *Herbæ perennes Magellanicæ et Andinæ habitu* Sisyrinchii, *radicibus fibrosis cæspitosis, foliis anguste linearibus vel teretibus, spathis multifloris sæpissimæ solitariis terminalibus, valvis exterioribus lanceolato-navicularibus viridibus, interioribus membranaceis, floribus fugitivis successivis cæruleis luteis vel albidis, pedicellis demum ac spatha æquilongis.*

Subgenus I. EUSOLENOMELUS. *Tubus perianthii gracilis curvatus.*

1. S. CHILENSIS, *Miers*, loc. cit.—Cruckshankia graminea, *Miers, Travels*, ii. 529.—Sisyrinchium pedunculatum, *Gillies in Bot. Mag.* t. 2965.—S. longistylum, *Lemaire in Flore des Serres*, t. 255.—Orthrosanthus chilensis, *Klotzsch, MS. Chili.*

Var. S. PUNCTATUS, *Miers in Trans. Linn. Soc.* xix. 96. *Chili.*

Subgenus II. LECHLERA (*Griseb.*). *Tubus perianthii rectus gracilis.*—Chamælum et Susarium, *ex parte, Philippi.*

2. S. ACAULIS, *Baker.*—Sisyrinchium acaule, *Klatt in Linnæa*, xxxiv. 736. *Andes Boliviæ.*

3. S. CHAMÆLUM, *Baker.*—Chæmælum luteum, *Philippi in Linnæa*, xxxiii. 250. *Andes Chilenses.*

4. S. NIGRICANS, *Baker.*—Susarium nigricans, *Philippi in Linnæa*, xxxiii. 249. *Chili.*

5. S. LECHLERI, *Baker.*—Lechlera Sisyrinchium, *Griseb. in Lechl. Pl. Chil. Exsic.* no. 2966.—Sisyrinchium Segethi, *Philippi in Linnæa*, xxxiii. 249. *Andes Chilenses.*

Subgenus III. SYMPHYOSTEMON (*Miers*). *Tubus perianthii rectus infundibularis dimidio inferiore cylindricus.*—Psithyrisma, *Herbert.*

6. S. ANDINUS, *Baker.*—Sisyrinchium andinum, *Phil. in Linnæa*, xxix. 62.—Susarium andinum, *Phil. in Linnæa*, xxviii. 250. *Andes Chilenses.*

7. S. BIFLORUS, *Baker.*—Gladiolus biflorus, *Thunb. Diss. Glad.* No. 5.—Sisyrnchium narcissoides, *Cav. Diss.* vi. t. 191. fig. 3.—Galaxia narcissoides, *Willd. Sp. Plant.* iii. 583.—Sisyrinchium odoratissimum, *Lindl. Bot. Reg.* t. 1283.—Symphyostemon narcissoides, *Miers in Trans. Linn. Soc.* xix. 97.—Psithyrisma narcissoides et flexuosum, *Herb. in Bot. Reg.* 1843, *Misc.* 84. *Chili et Patagonia.*

33. Xiphion, *Tournef.*

Tournef. Inst. i. 362, t. 189; *Miller, Gard. Dict.* edit. vi.—Xiphion § Euxiphion, *Parl. Fl. Ital.* iii. 304.—Chamoletta, *Adans. Famil.* 60.—Iris, *Linn. ex parte.*—Diaphane (ex parte) *et* Thelysia, *Salisb. in Trans. Hort. Soc.* i. 303.—Juno, *Tratt. Ausw.* i. 135.—Thelysia, *Parl. Fl. Ital.* iii. 316.—Costia, *Willk. in Bot. Zeit.* 1860, 131.—Coresanthe, *Alefeld in Bot. Zeit.* 1863, 298.

Perianthium regulare erectum, tubo supra ovarium subnullo vel elongato, limbi segmentis tribus exterioribus obovato-spathulatis flore expanso falcatis ungue imberbi raro parce barbato, tribus interioribus oblanceolatis erectis vel parvis inter ungues exteriorum patulis vel in § *Micropogon* prorsus obsoletis. *Stamina* 3 ad faucem tubi æquilateraliter inserta, stylis opposita, filamentis liberis erectis, antheris ligulatis basifixis filamentis subæquilongis. *Ovarium* cylindricum triloculare, ovulis in loculo crebris horizontalibus; *stylus* cum tubo concretus, ramis tribus magnis quadratis petaloideis apice cristis duabus magnis deltoideis præditis. *Capsula* magna oblonga chartacea loculicide trivalvis, seminibus globosis magnitudine pisi, testa crassa brunnea, albumine corneo. *Herbæ bulbosæ regionum Mediterraneæ et Orientis, bulbi tunicis brunneis membranaceis vel fibroso-reticulatis, foliis ensiformibus linearibus vel subulatis, caulibus productis vel nullis, spathæ sæpissime unifloræ valvis magnis lanceolatis, floribus speciosis lilacino-purpureis luteis vel albidis.*

Subgenus I. Euxiphion. *Perianthii segmenta exteriora imberbia, interiora magna oblanceolata ascendentia.*

1. X. vulgare, *Miller, Gard. Dict.* edit. 6.—X. angustifolium, *Tournef. Instit.* 364.—Iris Xiphium, *Linn. Sp. Plant.* 58, *ex parte*; *Bot. Mag.* t. 686; *Red. Lil.* t. 337.—Iris variabilis, *Jacq. Coll.* ii. 231. *Hispania, Gallia australis.*

Var. X. lusitanicum, *Alefeld in Bot. Zeit.* 1863, 297.—Iris lusitanica, *Ker in Bot. Mag. t.* 679.—I. juncea, *Brotero, Fl. Lusit.* i. 51, *non Desf. Lusitania.*

Var. X. sordidum, *Salisb. in Trans. Hort. Soc.* i. 303. *Lusitania.*

Var. Iris serotina, *Willk. Prodr. Fl. Hisp.* i. 141. *Hispania.*

Var. Iris spectabilis, *Spach, Ann. Sc. Nat.* ser. iii. vol. v. 93, *est verisimiliter hybridum hortense inter vulgarem et angustifolium.*

2. X. latifolium, *Miller, Gard. Dict.* edit. vi.—Iris xiphioides, *Ehrh.*

Beitr. vii. 140; *Bot. Mag.* t. 687; *Red. Lil.* t. 212.—I. Xiphium, *Linn. ex parte.*—I. Xiphium, *Jacq. Coll.* ii. 326.—I. pyrenaica, *Bubani, Sched. Crit.* 3. *Gallia australis, Hispania borealis.*

3. X. HISTRIO, *Hook. fil. Bot. Mag.* t. 6033.—Iris Histrio, *Reich. fil. in Bot. Zeit.* 1872, 488.—I. Libani, *Reuter, MS.* *Palæstina.*

4. X. FONTANESII, *Baker in Gard. Chron.* 1876, 559.—I. Fontanesii, *Godr. Fl. France,* iii. 245.—I. Xiphium, *Desf. Fl. Atlant.* i. 37, *non Linn.* *Algeria.*

5. X. FILIFOLIUM, *Klatt in Linnæa,* xxxiv. 571; *Hook. fil. Bot. Mag.* t. 5928.—Iris filifolia, *Boiss. Voy. Esp.* 602, t. 170. *Hispania australis.*

Var. LATIFOLIUM, *Baker.*—X. tingitanum, *Hook. fil. Bot. Mag.* t. 5981. *non Baker.* *Mauritania.*

6. X. JUNCEUM, *Klatt in Linnæa,* xxxiv. 570.—Iris juncea, *Desf. Fl. Atlant.* i. 39, t. 4; *Bot. Mag.* t. 5890. *non Brotero.*—I. imberbis, *Poir. Voy. Barb.* ii. 85.—I. mauritanica (*Clusius, Cur. Post.* 24), *Ker in Bot. Mag. sub* t. 986.—Diaphane stylosa, *Salisb. in Trans. Hort. Soc.* i. 305. *Algeria, Mauritania, Sicilia, Italia.*

7. X. TINGITANUM, *Baker in Seem. Journ.* 1871, 13.—Iris tingitana, *Boiss. & Reut. Pugill.* 118. *Mauritania.*

8. X. RETICULATUM, *Klatt in Linnæa,* xxxiv. 572.—Iris reticulata, *M. Bieb. Fl. Taur. Cauc.* 34, t. 1; *Cent. Pl. Ross.* t. 11; *Sweet, Brit. Flow. Gard.* ser. ii. t. 189; *Lodd. Bot. Cab.* t. 1829; *Regel, Gartenf.* t. 452; *Bot. Mag.* t. 5577.—Neubeckia reticulata, *Alefeld in Bot. Zeit.* 1863, 297. *Oriens, Caucasus.*

Var. KRELAGEI, *Regel, Animad.* 15. *Caucasus.*

Subgenus II. JUNO. *Perianthii segmenta exteriora imberbia; interiora minuta inter ungues exteriorum patula.*

9. X. PLANIFOLIUM, *Miller, Gard. Dict.* edit. 6.—X. alatum, *Baker in Seem. Journ.* 1871, 108.—Iris alata, *Poir. Voy. Barb.* ii. 86; *Bot. Reg.* t. 1876.—Thelysia alata, *Parlat. Fl. Ital.* iii. 317.—Coresanthe alata, *Klatt in Linnæa,* xxxiv. 575, *ex parte.*—Iris scorpioides, *Desf. Fl. Atlant.* i. 40, t. 6; *Red. Lil.* t. 211.—Juno scorpioides, *Tratt. Ausw.* i. 145.—Costia scorpioides, *Willk. in Bot. Zeit.* 1860, 131.—Neubeckia scorpioides, *Alefeld in Bot. Zeit.* 1863, 297.—Iris transtagana, *Brotero, Fl. Lusit.* i. 52.—I. trialata, *Brotero, Phyt. Lus.* ii. 44, t. 95.—I. microptera, *Vahl, Enum.* ii. 142.—Thelysia grandiflora, *Salisb. in Trans. Hort. Soc.* i. 303. *Europa australis, Algeria.* (*De synonymis cf. Aschersen in Bot. Zeit.* 1864, 112.)

10. X. PERSICUM, *Miller, Gard. Dict.* vi.—Iris persica, *Linn. Sp. Plant.* 52; *Bot. Mag.* t. 1; *Red. Lil.* t. 189.—Juno persica, *Tratt.*

Ausw. i. 135.—Costia persica, *Willk. in Bot. Zeit.* 1860, 132.—Coresanthe persica, *Alefeld in Bot. Zeit.* 1863, 296. *Asia Minor, Persia.*

11. X. PALÆSTINUM, *Baker in Seem. Journ.* 1871, 108.—Juno palæstina, *Klatt in Bot. Zeit.* 1872, 498. *Palæstina.*

12. X. CAUCASICUM, *Baker in Seem. Journ.* 1871, 109.—Iris caucasica, *Hoffm. Comm. Soc Phys. Med. Mosc.* i. 40; *Sweet, Brit. Flow. Gard.* t. 255.—Juno caucasica, *Klatt in Bot. Zeit.* 1872, 498.—Thelysia caucasica, *Parl. Fl. Ital.* iii. 317.—Costia caucasica, *Willk. in Bot. Zeit.* 1860, 132.—Neubeckia caucasica, *Alefeld in Bot. Zeit.* 1863, 297.—Coresanthe caucasica, *Klatt in Linnæa,* xxiv. 575. *Caucasus, Persia borealis.*

13. X. AITCHISONI, *Baker in Trimen, Journ.* 1875, 108. *Punjaub.*
Var. CHRYSANTHUM, *Baker. Punjaub.*

14. X. STOCKSII, *Baker in Gard. Chron.* 1876, 723. *Afghanistan, Beloochistan.*

15. X. AUCHERI, *Baker in Seem. Journ.* 1878, 110.—Juno Aucheri, *Klatt in Bot. Zeit.* 1872, 498.—Iris fumosa, *Boiss. & Hauss. Exsic. Syria.*

Subgenus III. MICROPOGON, *Baker in Trimen, Journ.* 1876, 265. *Perianthii segmenta exteriora unguibus parce barbatis; interiora prorsus obsoleta.*

16. X. DANFORDIÆ, *Baker in Trimen, Journ.* 1876, 265. *Taurus Ciliciæ.*

34. SPHENOSTIGMA, *Baker.*

Alophiæ sp., *Klatt.*

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis paulo difformibus obovato-spathulatis cuspidatis, interioribus distincte minoribus haud convolutis. *Stamina* 3 epigyna æquilateralia erecta, filamentis brevissimis liberis, antheris ligulatis erectis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis antheras superans, stigmatibus tribus parvis integris cuneatis. *Capsula* membranacea operculata clavata. *Semina* matura non vidi. *Herba bulbosa brasiliensis, foliis paucis linearibus subpetiolatis plicatis, caulibus teretibus foliis, spathis singulis terminalibus cylindricis paucifloris, valvis lanceolatis striatis viridibus acutis, floribus violaceis successivis fugitivis, pedicellis ac spatha æquilongis.*

1. S. SELLOWIANUM, *Baker.*—Alophia Sellowiana, *Klatt in Linnæa,* xxxi. 557; *Flor. Bras.* iii. 516, tab. 65. fig. 2. *Brasilia meridionalis.*

35. CIPURA, *Aublet.*

Aublet, Guian. 38, t. 13; *Klatt in Linnæa*, xxxi. 551.—Marica, *Schreb. Gen.* no. 81; *Ker, Gen. Irid.* 19, *ex parte, non Herbert.*

Perianthium regulare campanulatum, tubo supra ovarium brevissimo, segmentis dissimilibus, exterioribus majoribus obovato-spathulatis flore expanso patulis, interioribus minoribus obovatis erectis basi cuneatis diu conniventibus dorso concavis haud convolutis. *Stamina* 3 ad faucem tubi æquilateraliter inserta, antheris ligulatis erectis, filamento libero subulato æquilongis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* erectus filiformis, ramis tribus oblongis integris petaloideis. *Capsula* clavata, membranacea, ex apice loculicide trivalvis, seminibus crebris obovoideis vel triquetris, testa atra membranacea, albumine corneo. *Herbæ bulbosæ paludosæ americanæ tropicales, bulbi tunicis brunneis membranaceis, foliis linearibus plicatis subpetiolatis vel teretibus, caule gracili tereti, spathis pluribus cylindricis multifloris in umbellam unicam terminalem folio unico bracteatam congestis, valvis inæqualibus lanceolatis, pedicellis spathæ æquilongis, floribus albidis vel pallide cæruleis successivis fugitivis.*

1. C. PALUDOSA, *Aublet, loc. cit.*; *Klatt in Fl. Bras.* iii. 514, t. 64. fig. 1. —Marica paludosa, *Willd. Sp. Plant.* i. 246; *Ker in Bot. Mag.* t. 646.—M. Cipura, *Gmel. Syst. Veg.* 118.—Cipura humilis *et* graminea, *H. B. K. Nov. Gen.* i. 320. *America tropicalis tota.*

2. C. CUBENSIS, *Sauv. Fl. Cuba*, 166. *Cuba.*

36. ALOPHIA, *Herbert.*

Herbert in Bot. Mag. sub t. 3779; *Klatt in Linnæa*, xxxi. 556, excl. sp.—Cypellæ sp., *Graham.*

Perianthium regulare erectum, tubo supra ovarium subnullo, segmentis dissimilibus, exterioribus obovatis, interioribus minoribus navicularibus convolutis. *Stamina* 3 æqualiteralia, filamentis brevissimis, antheris panduriformibus connectivo lato. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* triqueter, superne incrassatus, stigmatibus bifidis ramis subulatis recurvatis. *Capsula* oblonga membranacea operculata. *Herbæ bulbosæ texanæ, caulibus teretibus parce foliatis, foliis lineribus plicatis, spathis bifloris valvis inæqualibus acutis viridibus, floribus successivis fugitivis violaceis unguibus luteis maculatis.*

1. A. Drummondiana, *Herbert, loc. cit.*—Cypella Drummondii, *Grah. in Edinb. New Phil. Journ.* xx. 190. *Texas.*

Species mihi imperfecte cognitæ.

2. A. linearis, *Klatt in Linnæa,* xxxi. 558.—Moræa linearis, *H. B. K. Nov. Gen.* i. 321. *Columbia, Guiana, et fide Klatt, Brasilia.*

3. A. geniculata, *Klatt in Mart. Fl. Bras.* iii. 517. *Brasilia centralis.*

37. Lansbergia, *De Vriese.*

De Vriese, Ind. Sem. Hort. Lug. Bat. 1846, 2; *Klatt in Linnæa,* xxxi. 547.—Trimezia, *Salisb. in Trans. Hort. Soc.* i. 308.—Xanthocromyon, *Karsten in Bot. Zeit.* 1847, 694.—Poarchon, *Mart. Syst. Mat. Med. Bras.* 77.—Remaclea, *Morren in Belg. Hort.* iii. 3, t. 1.—Iridis, Cipuræ, Ferrariæ sp. auct. vet.

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus obovatis ascendentibus, interioribus multo minoribus panduriformibus basi cuneatis convolutis diu conniventibus. *Stamina* 3 epigyna æquilateralia, filamentis liberis subulatis antheris æquilongis, antheris ligulatis ad styli ramos adglutinatis. *Ovarium* clavatum triloculare apice liberum, ovulis in loculo crebris; *stylus* cylindricus, apice incrassatus, ramis tribus cylindricis erecto-patentibus apice brevissime cristatis. *Capsula* oblonga membranacea vel coriacea operculata, ex apice loculicide trivalvis, seminibus in loculo crebris triquetris vel globosis, testa nigra obscura membranacea, albumine corneo. *Herbæ americanæ tropicales cormis duris præditis, foliis teretibus vel linearibus haud plicatis, caulibus teretibus nudis vel foliatis, spathis singulis vel paucis terminalibus cylindricis multifloris, valvis viridibus striatis acutis inæqualibus, floribus fugitivis successivis flavis, violaceis vel miniatis, pedicellis spathæ subæquilongis.*

Acaules.

1. L. juncifolia, *Klatt in Linnæa,* xxxi. 549. *Brasilia centralis.*

2. L. violacea, *Klatt in Mart. Fl. Bras.* iii. 526. *Brasilia centralis.*

3. L. cathartica, *Klatt in Linnæa,* xxxi. 549.—Ferraria cathartica, *Mart. Reise,* ii. 547. *Brasilia centralis.*

4. L. monticola, *Klatt in Mart. Fl. Bras.* iii. 526. *Brasilia centralis.*

5. L. purgans, *Klatt in Mart. Fl. Bras.* iii. 527.—Ferrraria purgans, *Mart. Reise,* ii. 547. *Brasilia centralis.*

Caulescentes.

6. L. martinicensis, *Baker.*—Iris martinicensis, *Linn. Sp.* 58; *Bot. Mag.* t. 416; *Red. Lil.* t. 172; *Descourt. Ant.* t. 252; *Jacq. Hist. Stirp. Am.* t. 10.—Cipura martinicensis, *H. B. K. Nov. Gen.* i. 320; *Ref. Bot.* 310.—Marica martinicensis, *Ker in König & Sims, Ann.* i. 225.—Vieusseuxia martinicensis, *DC. in Ann. Mus.* ii. 138.—Trimezia lurida, *Salisb. in Trans. Hort. Soc.* i. 280.—Lansbergia caracasana, *De Vriese, Ind. Sem. Lug. Bat.* 1846, 2; *Klatt in Fl. Bras.* iii. 527, tab. 57. fig. 2.—Xanthocromyon Herberti, *Karsten in Bot. Zeit.* 1847, 694.—Sisyrinchium galaxioides, *Gomes in Act. Acad. Uliss.* iii.; *Mem. Corr.* 99.—Poarchon fluminensis, *Allem. in Trans. Soc. Vellos.* No. 24, *cum icone.*—Sisyrinchium fluminense, *Vellos. Fl. Flum.* ix. t. 68.—Remaclea funebris, *Morren in Belg. Hort.* iii. 3, t. 1; *Klatt in Mart. Fl. Bras.* iii. 528, t. 68. fig. 1. *America tropicalis.*

7. L. spathata, *Klatt in Mart. Fl. Bras.* iii. 528. *Brasilia centralis.*

38. Hesperoxiphon, *Baker.*

Cypellæ, Ferrariæ *et* Poliæ sp. auct.

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus obovato-spathulatis flore expanso patulis, interioribus multo minoribus panduriformibus convolutis diu conniventibus. *Stamina* 3 epigyna æquilateralia, filamentis brevibus erectis deltoideis, antheris ligulatis basifixis styli ramis oppositis. *Ovarium* clavatum triloculare apice liberum, ovulis in loculo crebris; *stylus* filiformis, stigmatibus magnis quadratis petaloideis, apice cristis tribus deltoideis instructis, intermedia multo minore. *Capsula* clavata membranacea. *Semina* non vidi. *Herbæ bulbosæ americanæ, foliis petiolatis plicatis, caulibus teretibus simplicibus vel parce ramosis, spathis paucifloris pedunculatis valvis lanceolatis acutis, floribus speciosis fugitivis luteis, segmentorum unguibus pallidis maculatis.*

1. H. pusillum, *Baker.*—Ferraria pusilla, *Link & Otto, Ic.* t. 59.—Polia pusilla, *Klatt in Linnæa*, xxxi. 545.—Herbertia pusilla, *Sweet, Brit. Flow. Gard.* edit. 2, 497. *Brasilia meridionalis.*

2. H. peruvianum, *Baker.*—Cypella peruviana, *Baker in Bot. Mag.* t. 6213. *Andes peruvianæ.*

39. Phalocallis, *Herbert.*

Herbert in Bot. Mag. t. 3710; *Klatt in Linnæa*, xxxi. 536.—Cypellæ sp., *Lindl.*

Perianthium erectum, tubo supra ovarium nullo, limbi campanulati segmentis difformibus, exterioribus majoribus obovato-spathulatis flore expanso falcatis, interioribus minoribus obovato-unguiculatis convolutis. *Stamina* 3 epigyna erecta, filamentis brevissimis deltoideis liberis, antheris medio constrictis connectivo lato, superne ad styli ramos adglutinatis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* erectus deorsum filiformis, superne cyathiformis trigonus, stigmatibus cristis 2 deltoideis petaloideis transversalibus præditis, basi obscure appendiculatis. *Capsula* clavata membranacea obscure operculata indehiscens, seminibus discoideis anguste alatis. *Herba bulbosa brasiliensis, bulbi tunicis brunneis membranaceis, foliis linearibus plicatis petiolatis, caulibus parce ramosis teretibus foliatis, spathis terminalibus pedunculatis multifloris valvis lanceolatis firmis striatis, pedicellis spathæ æquilongis, floribus magnis successivis fugitivis lilacinis segmentorum unguibus luteo et rubro maculatis.*

1. P. PLUMBEA, *Herbert, loc. cit.*; *Flore des Serres,* t. 395 & 1466; *Klatt in Mart. Fl. Bras.* iii. 518, tab. 66. fig. 1.—Cypella plumbea, *Lindl. in Bot. Reg.* t. 24.—Tigridia cœlestis, *Otto MS. Brasilia meridionalis.*

40. CYPELLA, *Herbert.*

Herbert in Bot. Mag. sub t. 2637; *Endlich. Gen.* No. 1228.—Polia, *Tenore, Rev. Bot.* ii. 126; *Klatt in Linnæa,* xxxi., 543.—Marica, *Ker, Gen. Irid.* 19, *ex parte.*—Moreæ sp., *Lindl.*

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus obovato-cuneatis flore expanso patulis, interioribus multo minoribus panduriformibus convolutis diu conniventibus. *Stamina* 3 epigyna, filamentis planis brevibus liberis, antheris erectis ligulatis basifixis. *Ovarium* clavatum triloculare apice liberum, ovulis in loculo crebris; *stylus* filiformis, ramis tribus apice turbinatis bifidis, ramulis tricuspidatis, cuspide centrali producta, lateralibus multo minoribus, exteriore patula. *Capsula* clavata membranacea operculata trivalvis, seminibus parvis triquetris, testa brunnea, albumine corneo. *Herbæ bulbosæ brasilienses et bonarienses, bulbi tunicis brunneis membranaceis, foliis paucis superpositis linearibus plicatis, caulibus teretibus fragilibus sæpissime ramosis, spathis paucifloris pedunculatis cylindricis valvis viridibus lanceolatis acutis, floribus successivis fugitivis luteis vel cæruleis.*

1. C. HERBERTI, *Herb. in Bot. Mag. sub* t. 2637; *Sweet, Brit. Flow.*

Gard. ser. ii. t. 33.—Tigridia Herbertiana, *Herbert in Bot. Mag.* t. 2599.—Moræa Herberti, *Lindl. in Bot. Reg.* t. 949.—Marica Herbertiana, *Ker, Gen. Irid.* 19.—Polia bonariensis, *Ten. Rev. Bot.* ii. 127. *Bonaria.*

Var. POLIA RAMOSA, *Klatt in Linnæa,* xxxi. 544. *Monte Video et Brasilia meridionalis.*

2. C. GRACILIS, *Baker.*—Polia gracilis, *Klatt in Linnæa,* xxxi. 545. *Brasilia, Monte Video.*

41. MORÆA, *Miller.*

Miller, Icon. t. 238; *Dict.* edit. vi. *ex parte*; *Linn. Gen.* No. 60, *ex parte*; *Ker, Gen. Irid.* 31, *ex parte*; *Klatt in Linnæa,* xxxiv. 557.—Iris, *Thunb. Diss. ex parte.*—Helixyra, *Salisb. in Trans. Hort. Soc.* i. 305.—Gynandriris, *Parl. Nuov. Gen.* 49; *Klatt in Linnæa,* xxxiv. 576.—Hymenostigma, *Hochst. in Flora,* 1844, 24.—Freuchenia, *Eckl. Top. Verz.* 14—Vieusseuxia, *Eckl. Top. Verz.* 11, *ex parte, non Delaroche.*

Perianthium regulare erectum, tubo supra ovarium nullo vel producto, segmentis difformibus, exterioribus oblongo- vel obovato-unguiculatis supra medium flore expanso patulis unguibus nudis vel obscure barbatis, interioribus subæquilongis angustioribus. *Stamina* 3 epigyna vel perigyna æquilateralia stigmatibus opposita, filamentis sæpissime inferne coalitis superne liberis, antheris ligulatis erectis basifixis. *Ovarium* clavatum 3-loculare, ovulis in loculo crebris; *stylus* filiformis, stigmatibus tribus planis petaloideis apice cristis 2 petaloideis præditis. *Capsula* oblongo-trigona membranacea vel coriacea loculicide trivalvis, seminibus triquetris, testa brunnea, albumine corneo. *Herbæ bulbosæ vel tuberosæ, tunicis fibrosis vel cancellatis, foliis paucis superpositis planis vel teretibus interdum pilosis, caulibus teretibus simplicibus vel ramosis, spathis paucifloris pedunculatis, valvis exterioribus firmis lanceolatis acutis, floribus sæpissime fugitivis lilacinis vel luteis.*

Subgenus I. EUMORÆA. *Perianthii tubus obsoletus. Stamina epigyna.*

* *Nanæ.*

1. M. PAPILONACEA, *Ker in Bot. Mag.* t. 750.—Iris papilionacea, *Linn. fil. Suppl.* 98; *Thunb. Diss.* No. 37, tab. 2. fig. 1; *Jacq. Coll. Suppl.* 159, tab. 3. fig. 2.—Moræa ciliata, *Herb. Drege.*—Vieusseuxia ciliata et nervosa, *Eckl. Top. Verz.* 11–12.—Moræa hirsuta, *Ker, Gen. Irid.* 43.—Iris hirsuta, *Licht. in Roem. & Schult. Syst. Veg.* i. 478. *C. B. Spei.*

2. M. FIMBRIATA, *Klatt in Linnæa*, xxxiv. 561. *C. B. Spei.*

3. M. CILIATA, *Ker in König & Sims, Ann.* i. 241; *Bot. Mag.* t. 1061.—Iris ciliata, *Linn. fil. Suppl.* 98. *C. B. Spei.*

4. M. BARBIGERA, *Salisb. in Trans. Hort. Soc.* i. 306.—M. ciliata, var., *Ker in Bot. Mag.* t. 1012.—? M. pilosa, *Wendl. Obs. Bot.* 45. *C. B. Spei.*

5. M. TRICOLOR, *Andr. Bot. Rep.* t. 83. *C. B. Spei.*

6. M. MINUTA, *Ker in König & Sims, Ann.* i. 219.—Iris minuta, *Linn. fil. Suppl.* 98. *C. B. Spei.*

7. M. POLYPHYLLA, *Baker.* *C. B. Spei.*

8. M. GALAXIOIDES, *Baker.* *Transvaal.*

** *Simplicicaules.*

9. M. LURIDA, *Ker in Bot. Reg.* t. 312. *C. B. Spei.*

10. M. ANGUSTA, *Ker in Bot. Mag.* t. 1276.—Iris angusta, *Thunb. Diss.* No. 28. *C. B. Spei.*

11. M. ZAMBESIACA, *Baker.* *Terra fluminis Zambesi.*

12. M. TEXTILIS, *Baker.* *Angola.*

13. M. WELWITSCHII, *Baker.* *Angola.*

14. M. GRACILIS, *Baker.* *Angola.*

15. M. DIVERSIFOLIA, *Baker.*—Xiphion diversifolium, *Klatt in Linnæa*, xxxiv. 572.—Vieusseuxia Schimperi *et* tridentata, *Hochst. in Schimp. Pl. Abyss.* No. 1296.—Hymenostigma Schimperi *et* tridentatum, *Hochst. in Flora*, 1844, 24-25.—Iris diversifolia, *Steud. in Schimp. Pl. Abyss.* No. 1173. *Abyssinia.*

*** *Edules.*

16. M. SETACEA, *Ker in König & Sims, Ann.* i. 240.—Iris setifolia, *Linn. fil. Suppl.* 99.—Iris setacea, *Thunb. Diss.* No. 29, tab. 1. fig. 2.—Vieusseuxia setacea, *Eckl. Top. Verz.* 13. *C. B. Spei.*

17. M. JUNCEA, *Linn. Sp.* edit. 2, 59 (*Linn. herb.* ! *an Miller* ?). *C. B. Spei.*

18. M. PLUMARIA, *Ker in König & Sims, Ann.* i. 240.—Iris plumaria, *Thunb. Diss.* No. 16.—Vieusseuxia plumaria, *Eckl. Top. Verz.* 14.—Moræa iriopetala, *Linn. Suppl.* 100.—M. vegeta, *Linn. herb.* ! *non Miller.* *C. B. Spei.*

19. M. POLYANTHOS, *Thunb. Diss.* No. 14.—Vieusseuxia graminifolia, *Eckl. Top. Verz.* 11. *C. B. Spei.*

20. M. EDULIS, *Ker in König & Sims, Ann.* i. 241; *Bot. Mag.* t. 613.

—Iris edulis, *Linn. Suppl.* 98.—I. capensis, *Burm. Prodr.* 2.—Moræa vegeta, *Jacq. Ic.* t. 224, *non Miller.*—M. fugax, *Jacq. Hort. Vind.* iii. 14, t. 20.—Iris Sisyrinchium, *Red. Lil.* t. 458, *non Linn.*—Vieusseuxia edulis, *Eckl. Top. Verz.* 14. *C. B. Spei.*

Var. M. ODORA, *Salisb. Parad. Lond.* t. 10. *C. B. Spei*

Var. M. LONGIFOLIA, *Sweet, Hort. Brit.* edit. 2, 497.—Iris longifolia, *Schneev. Ic.* t. 20; *Andr. Bot. Rep.* t. 45.—Moræa edulis, var., *Ker in Bot. Mag.* t. 1238.—Vieusseuxia longifolia, *Eckl. Top. Verz.* 14. *C. B. Spei.*

21. M. SPITHAMÆA, *Baker. Angola.*

22. M. ANDONGENSIS, *Baker. Angola.*

23. M. TRISTIS, *Ker in König & Sims, Ann.* i. 241.—Iris tristis, *Linn. fil. Suppl.* 97; *Ker in Bot. Mag.* t. 577.—Vieusseuxia tristis, *Eckl. Top. Verz.* 11.—M. sordescens, *Jacq. Ic.* t. 225; *Red. Lil.* t. 71.—M. iriopetala, var., *Willd. Sp. Plant.* i. 244; *Miller, Icones,* tab. 238. *C. B. Spei.*

24. M. GLUTINOSA, *Baker. Angola.*

25. M. POLYSTACHA, *Ker in König & Sims, Ann.* i. 240.—Iris polystachya, *Thunb. Diss.* No. 41.—Vieusseuxia polystachya, *Eckl. Exsic.*—Iris lacera, *Lam. Encyc.* iii. 304. *C. B. Spei.*

26. M. SPATHACEA, *Ker in Bot. Mag. sub* t. 1103.—Iris spathacea, *Thunb. Diss.* No. 23.—I. spathulata, *Linn. Suppl.* 99.—Moræa longispatha, *Klatt in Linnæa,* xxxiv. 360.—Dietes Huttoni, *Bot. Mag.* t. 6174. *C. B. Spei.*

27. M. GIGANTEA, *Klatt in Linnæa,* xxxv. 381. *C. B. Spei.*

**** *Candelabra.*

28. M. CANDELABRUM, *Baker. Angola.*

29. M. CRISPA, *Ker in Bot. Mag.* t. 759 & 1284.—Iris crispa, *Linn. fil. Suppl.* 98.—Vieusseuxia crispa, *Eckl. Top. Verz.* 12. *C. B. Spei.*

Var. M. UNDULATA, *Ker, Gen. Irid.* 43.—M. crispa, *Thunb. Diss.* No. 17. *C. B. Spei.*

30. M. BITUMINOSA, *Ker in König & Sims, Ann.* i. 240; *Bot. Mag.* t. 1045.—Iris bituminosa, *Linn. fil. Suppl.* 98.—Vieusseuxia bituminosa, *Eckl. Top. Verz.* 14. *C. B. Spei.*

31. M. VISCARIA, *Ker in König & Sims, Ann.* i. 240.—Iris viscaria, *Linn. fil. Suppl.* 98.—Vieusseuxia viscaria, *Eckl. Top. Verz.* 12. *C. B. Spei.*

32. M. RAMOSA, *Ker in Bot. Mag.* t. 771.—Iris ramosa, *Thunb. Diss.* No. 24.—Iris ramosissima, *Linn. fil. Suppl.* 99.—Moræa racemosa, *Herb. Drege.*—M. bulbifera, *Jacq. Hort. Schoen.* t. 197; *Bot. Mag.* t. 5785.—Freuchenia bulbifera, *Eckl. Top. Verz.* 14. *C. B. Spei.*

Subgenus II. HELIXYRA. *Perianthii tubus productus. Stamina perigyna.* Sisyrinchium, *Adans., non Linn.*—Gynandriris, *Parl.*

33. M. SISYRINCHIUM, *Ker in König & Sims, Ann.* i. 241; *Bot. Mag.* t. 1407.—Iris Sisyrinchium, *Linn. Sp. Plant.* edit. ii. 59; *Cav. Ic.* t. 193; *Sibth. & Smith, Fl. Græc.* t. 42; *Red. Lil.* t. 29.—Gynandriris Sisyrinchium, *Parl. Nuov. Gen.* 49.—Xiphion Sisyrinchium, *Baker in Seem. Journ.* 1871, 42; *Bot. Mag.* t. 6096.—Diaphane edulis, *Salisb. in Trans. Hort. Soc.* i. 304. *Regio Mediterranea, Oriens, Afghanistan.*

Var. MINOR, *Cambes. Enum. Balear.* 142.—Iris monophylla, *Boiss. & Held. Exsic.*—I. Sisyrinchium, var. monophylla, *Held. in Atti Cong. Intern. Firenz.* 234.—Gynandriris monophylla, *Klatt in Linnæa,* xxxiv. 578, *ex parte.*

Var. I. SAMARITANII, *Held. in Atti Inter. Cong. Firenz.* 234. *Ægyptus.*

Var. ÆGYPTIA.—Iris ægyptia, *Delile, Fl. Arab.* 6.

Var. M. FUGAX, *Tenore, Syll.* 46.—Iris fugax, *Tenore, Fl. Neap.* i. 15, t. 14.—M. Tenoreana, *Sweet, Brit. Flow. Gard.* t. 110.

34. M. BURCHELLII, *Baker. C. B. Spei.*

35. M. LONGIFLORA, *Ker in Bot. Mag.* t. 712.—Helixyra flava, *Salisb. in Trans. Hort. Soc.* i. 305. *C. B. Spei.*

42. VIEUSSEUXIA, *Delaroche.*

Delaroche, Diss. xxxi. t. 5; *DC. in Mém. Mus.* ii. 136, *cum icone*; *Klatt in Linnæa,* xxxiv. 620; *Eckl. Top. Verz.* 11, *ex parte.*—Moræa, *Ker, Gen. Irid.* 35, *ex parte.*—Iris, *Linn. fil. et Thunb. Diss. ex parte.*

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus obovatis unguiculatis flore expanso patulis, interioribus multo minoribus longe unguiculatis lamina parva sæpissime rhomboidea tricuspidata instructis. *Stamina* 3 æquilateralia epigyna stigmatibus opposita, filamentis in tubum cylindricum prorsus connatis, antheris ligulatis erectis basifixis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis, ramis stigmatosis planis petaloideis apice cristis 2 lanceolatis petaloideis præditis. *Capsula* clavata membranacea ab apice loculicide trivalvis, seminibus parvis triquetris, testa brunnea, albumine corneo. *Herbæ bulbosæ capenses, bulbi tunicis fibrosis, foliis angustissimis superpositis duris, caulibus gracillimis teretibus simplicibus vel ramosis, spathis paucifloris* *terminalibus pedunculatis valvis firmis viridibus lanceolatis acutis, floribus successivis fugitivis.*

1. V. TRIPETALOIDES, *DC. in Ann. Mus.* ii. 138.—Moræa tripetala, *Ker in Bot. Mag.* t. 702.—Iris tripetala, *Linn. Suppl.* 92; *Jacq. Ic.* t. 221. *C. B. Spei.*

2. V. MUTILA, *Klatt in Linnæa,* xxxiv. 621.—Iris mutila, *Licht. in Roem. & Schult. Syst. Veg.* i. 477. *C. B. Spei.*

3. V. UNGUICULARIS, *Roem. & Schult. Syst. Veg.* i. 491.—Moræa unguiculata, *Ker in Bot. Mag.* t. 593. *C. B. Spei.*

4. V. TRICUSPIS, *Spreng. Syst. Veg.* i. 165.—V. aristata, *Houtt. Handl.* xii. 105, t. 80, *non Delaroche.*—Iris tricuspidata, *Linn. fil. Suppl.* 98. —Moræa tricuspis, *Ker in Bot. Mag.* t. 696.—Iris tricuspis, *Jacq. Ic.* t. 222. fig. sinistr. *C. B. Spei.*

5. V. GLAUCOPIS, *DC. in Ann. Mus.* ii. 141; *Red. Lil.* t. 42; *Flore des Serres,* t. 423.—Iris pavonia, *Curt. Bot. Mag.* t. 168, *non aliorum.* —I. tricuspis, *Jacq. Coll.* iv. t. 9. fig. 1.—Moræa tricuspis, var., *Ker in Bot. Mag. sub* t. 696. *C. B. Spei.*

6. V. TENUIS, *Roem. & Schult. Syst. Veg.* i. 491.—Iris tricuspis, var., *Jacq. Ic.* t. 222. fig. dextr.—Moræa tenuis, *Ker in Bot. Mag.* t. 1047. —? Iris gracilis, *Licht. in Roem. & Schult. Syst. Veg.* i. 477. *C. B. Spei.*

7. V. SPIRALIS, *Delaroche, Diss.* xxxi. t. 5.—Moræa tricuspis, var. lutea, *Ker in Bot Mag.* t. 772.—V. Bellendeni, *Sweet, Hort. Brit.* edit. ii. 498. *C. B. Spei.*

8. V. PAVONIA, *DC. in Ann. Mus.* ii. 139.—Iris pavonia, *Linn. Suppl.* 98; *Thunb. Diss.* No. 35, tab. 1. fig. 3; *Jacq. Hort. Schoen.* t. 10; *Andr. Bot. Rep.* t. 61.—Moræa pavonia, *Ker in Bot. Mag.* t. 1247. *C. B. Spei.*

9. V. VILLOSA, *Spreng. Syst. Veg.* i. 165.—Iris villosa, *Ker in Bot. Mag.* t. 571,—Moræa pavonia, *Ker in König & Sims, Ann.* i. 240.— Iris tricuspis, var., *Thunb. Diss.* No. 15. *C. B. Spei.*

Species mihi incognitæ.

10. V. FUGAX, *Delaroche, Diss.* 33. *C. B. Spei.*

11. V. ARISTATA, *Delaroche, Diss.* 33. *C. B. Spei.*

43. HERBERTIA, *Sweet.*

Sweet, Brit. Flow. Gard. t. 222; *Klatt in Linnæa,* xxxi. 553.— Trifurcia, *Herbert in Bot. Mag. sub* t. 3779.—Roterbe, *Steud. in Leichler, Pl. Peruv.* No. 398, non *Klatt.*

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus obovato-cuneatis obtusis cuspidatis, interioribus multo minoribus planis sæpissime oblanceolatis acutis. *Stamina* 3 epigyna, filamentis in tubum cylindricum prorsus connatis, antheris sessilibus ligulatis ascendentibus. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis, ramis stigmatosis subulatis vel applanatis integris vel 2–3-cuspidatis. *Capsula* coriacea clavata operculata apice loculicide trivalvis, seminibus crebris minutis turgidis testa atro-brunnea, albumine corneo. *Herbæ Americanæ bulbosæ humiles, bulbi tunicis membranaceis brunneis, foliis linearibus plicatis, caulibus teretibus sæpissime simplicibus, spathis paucifloris cylindricis terminalibus pedunculatis valvis lanceolatis acutis, pedicellis spathæ subæquilongis, floribus parvis successivis fugitivis cæruleis.*

Texanæ.

1. H. Drummondiana, *Herbert in Bot. Reg.* xxviii. *Misc.* 65. *Texas.*
2. H. cærulea, *Herbert in Bot. Mag.* 3862, fig. *d, e, f.*—Trifurcia cærulea, *Herb. in Bot. Mag. sub* t. 3779. *Texas.*

Austro-Americanæ.

3. H. pulchella, *Sweet, Brit. Flow. Gard.* t. 222; *Lodd. Bot. Cab.* t. 1547; *Herb. in Bot. Mag.* t. 3862, figs. 1 & 2.—Roterbe bulbosa, *Steud. in Lech. Pl. Chil.* No. 298.—H. cærulea, *Klatt, Linnæa,* xxxi. 554, *non Herbert. Chili, Brasilia meridionalis, Bonaria.*
4. H. umbellata, *Klatt in Linnæa,* xxxi. 555; *Fl. Bras.* iii. 350, tab. 69. fig. 1. *Brasilia meridionalis.*
5. H. brasiliensis, *Baker.*—H. Drummondiana, *Klatt in Linnæa,* xxxi. 555, *non Herbert. Brasilia meridionalis.*
6. H. unguiculata, *Baker. Brasilia meridionalis.*

44. Rigidella, *Lindl.*

Lindl. in Bot. Reg. 1840, t. 16, *Misc.* No. 64.

Perianthium regulare cernuum vel erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus oblongo-unguiculatis flore expanso ad medium reflexis vel patulis, interioribus minutis occultis cordato-ovatis cuspidatis unguiculatis. *Stamina* 3 epigyna æquilateralia stigmatibus opposita, filamentis in tubum cylindricum prorsus connatis, antheris ligulatis erectis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis, stigmatibus tribus tripartitis ramulis subulatis exterioribus productis centrali brevissimo cornuto. *Capsula* clavata operculata, apice loculicide trivalvis, seminibus globosis, testa brunnea, raphe et chalaza conspicuis, albumine corneo. *Herbæ bulbosæ Mexicanæ et Guatemalenses, bulbi tunicis brunneis membranaceis, foliis loratis plicatis, caulibus teretibus ramosis, spathis multifloris valvis exterioribus viridibus lanceolatis, floribus splendide coccineis successivis fugitivis.*

1. R. FLAMMEA, *Lindl. loc. cit.* *Mexico.*

2. R. IMMACULATA, *Herbert in Bot. Reg.* 1841, t. 68. *Guatemala.*

3. R. ORTHANTHA, *Paxton, Mag.* xiv. 121, cum icone. *Mexico.*

45. HYDROTÆNIA, *Lindl.*

Lindl. in Bot. Reg. 1838, *Misc.* 128.

Perianthium regulare cernuum campanulatum, tubo supra ovarium nullo, segmentis paullo difformibus, exterioribus oblongis acutis diu ascendentibus, interioribus æquilongis oblongo-quadratis obtusis cuspidatis basi cordatis breviter unguiculatis supra unguem maculatum zona transversali deltoidea crystallina instructis. *Stamina* 3 æquilateralia epigyna, filamentis in tubum cylindricum prorsus connatis, antheris stigmatibus oppositis ligulatis suberectis connectivo lato breviter producto apiculatis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis, ramis stigmatosis trifurcatis ramulis applanatis exterioribus elongatis, centrali brevi. *Capsula* clavata membranacea operculata. Semina non vidi. *Herba bulbosa Mexicana, bulbi tunicis brunneis membranaceis, foliis superpositis plicatis, caulibus teretibus ramosis, spathis paucifloris, valvis lanceolatis viridibus, floribus successivis fugitivis.*

1. H. MELEAGRIS, *Lindl. loc. cit.*; *Bot. Reg.* xxxviii. t. 39. *Mexico.*

46. TIGRIDIA, *Juss.*

Juss. Gen. 57; *Ker, Gen. Irid.* 25; *Klatt in Linnæa,* xxxi. 550. —Beatonia, *Herbert in Bot. Mag. sub* t. 3779; *Klatt in Linnæa,* xxxi. 565.—Ferrariæ *et* Moreæ sp. *auct. vet.*

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus, exterioribus oblongis, interioribus panduriformibus convolutis multo minoribus. *Stamina* 3 epigyna, filamentis in tubum cylindricum prorsus connatis, antheris sessilibus ligulatis suberectis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* filiformis, ramis stigmatosis subulatis profunde bifidis. *Capsula* membranacea clavata operculata triloculicide trivalvis, seminibus parvis angulatis, testa brunnea, albumine corneo. *Herbæ bulbosæ Americanæ tropicales, foliis paucis superpositis linearibus plicatis, caulibus teretibus simplicibus vel parce ramosis, spathis pedunculatis terminalibus paucifloris, valvis exterioribus viridibus lanceolatis acutis, pedicellis elongatis, floribus speciosis successivis fugitivis.*

* EUTIGRIDIA. *Grandiflora, stigmatibus secus stylos decurrentibus.*

1. T. PAVONIA, *Ker in König & Sims, Ann.* i. 246.—Ferraria Pavonia, *Linn. fil. Suppl.* 407; *Cav. Diss.* vi. 342, t. 189. fig. 1; *Andr. Bot. Rep.* t. 178; *Red. Lil.* t. 6; *Lodd. Bot. Cab.* t. 1424; *Klatt in Mont. Fl. Bras.* iii. t. 70.—F. Tigridia, *Ker in Bot. Mag.* t. 532.—Moræa Tigridia, *Thunb. Diss.* No. 20.—Tigridia grandiflora, *Salisb. in Trans. Hort. Soc.* i. 309. *Mexico, Guatemala.*

Var. T. CONCHIFLORA, *Sweet, Brit. Flow. Gard.* t. 128; *Paxt. Mag.* xiv. 53; *Flore des Serres*, t. 908–910; *Ann. Gand.* 1847, t. 145.—T. oxypetala, *Morison, Fl. Conspic.* t. 20. *Mexico.*

** BEATONIA. *Parvifloræ, stigmatibus ad apicem stylorum capitatis.*

2. T. LUTEA, *Link, Klotzsch & Otto, Ic.* t. 34; *Baker in Bot. Mag.* t. 6295.—Sisyrinchium grandiflorum, *Cav. Ic.* t. 192 (mala).—Beatonia lutea, *Klatt in Linnæa*, xxxi. 566. *Peruvia et Chili.*

3. T. VIOLACEA, *Schiede*; *Schlecht. in Otto & Dietr. Gartenzeit.* 1838, 233; *Link, Klotzsch & Otto, Ic.* t. 20.—Beatonia purpurea, *Herb. in Bot. Mag. sub* t. 3779. *Mexico.*

4. T. VAN HOUTTEI, *Roezl in Flore des Serres*, t. 2174. *Mexico.*

5. T. ATRATA, *Baker.*—Beatonia atrata, *Herb. in Bot. Reg.* 1843, *Misc.* 72. *Mexico.*

6. T. CURVATA, *Baker.*—Beatonia curvata, *Herb. in Bot. Reg.* 1843, *Misc.* 74. *Mexico.*

47. IRIS, *Tourn.*

Tourn. Instit. t. 186–8; *Linn. Gen.* No. 59, ex parte; *Ker, Gen.*

Irid. 45, ex parte; *Spach, Veg. Phan.* xiii. 12; *Klatt in Linnæa,* xxxiv. 591.—Evansia, *Salisb. in Trans. Hort. Soc.* i. 303.—Dietes, *Salisb. in Trans. Hort. Soc.* i. 307; *Klatt in Linnæa,* xxxiv. 583.—Xiphion, *Parl. Fl. Ital.* iii. 293, *ex parte*; *Alefeld in Bot. Zeit.* 1863, 296, *ex parte.*—Neubeckia, *Alefeld in Mohl & Schlecht. Bot. Zeit.* xxi. 1863, 297; *Klatt in Linnæa,* xxxiv. 587.—Oncocyclus, *Siem. in Mohl. & Schlecht. Bot. Zeit.* 1846, 705; *Klatt in Linnæa,* xxxiv. 578.—Xyridion *et* Ioniris, *Klatt in Bot. Zeit.* 1872, 499–502.

Perianthium regulare erectum, tubo supra ovarium brevi vel elongato, limbi late infundibularis segmentis difformibus, tribus exterioribus obovato-unguiculatis flore expanso falcatis, unguibus nudis vel barbatis vel cristatis, interioribus obovato- vel oblanceolato-spathulatis sæpissime erectis, exterioribus minoribus interdum perparvis interdum cum exterioribus patulis. *Stamina* 3 stigmatibus opposita ad faucem tubi inserta erecta, filamentis angustis applanatis, antheris ligulatis basifixis filamento æquilongis vel longioribus. *Ovarium* triloculare, ovulis in loculo crebris horizontalibus; *stylus* filiformis, stigmatibus magnis quadratis petaloideis apice cristis duabus lanceolatis vel petaloideis reflexis subintegris vel serrulatis præditis. *Capsula* magna oblonga loculicide trivalvis, seminibus multis globosis vel leviter compressis, testa crassa lucida brunnea vel interdum coccinea, albumine corneo. *Herbæ præsertim regionis borealis temperatæ, rhizomate obliquo crasso, foliis basalibus pluribus persistentibus flabellato-distichis linearibus vel ensiformibus, caule simplici vel corymboso foliis paucis reductis prædito, spathæ paucifloræ vel unifloræ valvis magnis lanceolatis arcte imbricatis viridibus vel margine membranaceis, floribus speciosis magnis modice persistentibus vel fugitivis sæpissime luteis vel lilacino-purpureis.*

Series I. *Species regionis borealis temperatæ, segmentis interioribus sæpissime erectis.*

Subgenus I. Apogon. *Perianthii segmenta exteriora unguibus nudis.* Limniris, Xyridion, et Spathula, *Tausch in Rœm. & Schult. Syst. Veg.* i. *Suppl.* 370.

* *Folia linearia.*

1. I. humilis, *M. Bieb. Fl. Taur. Cauc.* i. 33; *Cent. Ross.* t. 13.—Neubeckia humilis, *Alefeld in Bot. Zeit.* 1863, 297.—I. ruthenica,

Ker, Gen. Irid. 54, ex parte.—Ioniris humilis, *Klatt in Bot. Zeit.* 1872, 502. *Rossia meridionalis, Transylvania, Siberia occidentalis.*

2. I. CRETENSIS, *Janka in Œstr. Bot. Zeit.* 1867, 376.—I. stylosa, var. angustifolia, *Boiss. Diag.* xiii. 15.—I. humilis, *Sieber, Pl. Cret. Exsic. non M. B. Græcia, Asia minor, Creta, Insulæ Ionicæ.*

3. I. UNGUICULARIS, *Poiret, Iter,* ii. 56.—I. stylosa, *Desf. Fl. Atlant.* i. 40, t. 5; *Hook. fil. Bot. Mag.* t. 5773.—Neubeckia stylosa, *Alefeld in Bot. Zeit.* 1863, 297.—Ioniris stylosa, *Klatt in Bot. Zeit.* 1872, 502. *Algeria.*

4. I. VENTRICOSA, *Pallas, Iter,* iv. 455; *App.* 682, t. 27. fig. 1.—Xyridion ventricosum, *Klatt in Bot. Zeit.* 1872, 500. *Siberia orientalis.*

5. I. TENUIFOLIA, *Pallas, Iter,* iv. 302; *App.* 683, tab. 7. fig. 2.—Neubeckia tenuifolia, *Alefeld in Bot. Zeit.* 1863, 297.—Ioniris tenuifolia, *Klatt in Bot. Zeit.* 1872, 502.—I. acaulis, *Pallas, Iter,* iii. 313. *Siberia.*

6. I. SONGARICA, *Schrenck, Enum.* i. 3.—Ioniris songarica, *Klatt in Bot. Zeit.* 1872, 502. *Asia centralis.*

7. I. MACROSIPHON, *Torrey, Bot. Whipple,* 144.—I. Douglasiana, *Torrey, Bot. Whipple,* 144, *non Herb. California.*

8. I. RUTHENICA, *Dryand. in Ait. Hort. Kew.* edit. 2, i. 117; *Bot. Mag.* t. 1123 et 1393.—Ioniris ruthenica, *Klatt in Bot. Zeit.* 1872, 502.—Iris cæspitosa, *Pallas in Link, Jahrb.* iii. 71.—I. verna, *Pallas, Iter,* iii. 213, *non Linn. Transylvania, Siberia.*

9. I. DOUGLASIANA, *Herb. in Hook. & Arn. Bot. Beech.* 385; *Hook. fil. Bot. Mag.* t. 6083. *California.*

Var. I. BEECHEYANA, *Herb. in Hook. & Arn. Bot. Beech.* 395. *California.*

10. I. TOLMIEANA, *Herb. in Hook. & Arn. Bot. Beech.* 395.—? I. missouriensis, *Nuttall in Journ. Acad. Phil.* vii. 58. *California, Oregon, Nevada.*

11. I. TRIPETALA, *Walt. Fl. Carol.* 66, *non Linn. fil.*—I. tridentata, *Sweet. Brit. Flow. Gard.* t. 274, *non Pursh. Carolina ad Floridam.*

12. I. TENAX, *Douglas in Bot. Reg.* t. 1218; *Hook. Bot. Mag.* t. 3343. —Ioniris tenax, *Klatt in Bot. Zeit.* 1872, 502. *America borealis.*

13. I. HARTWEGII, *Baker in Gard. Chron.* 1876, 323. *California.*

14. I. PRISMATICA, *Pursh, Fl. Amer. Sept.* i. 30; *Bot. Mag.* t. 1504. —I. virginica, *A. Gray, Man.* edit. v. 516, *non Linn.*—I. gracilis, *Bigelow, Flor. Bost.* 12.—I. Boltoniana, *Roem. & Schultes, Syst. Veg.* i. *Suppl.* 308. *America borealis orientalis.*

15. I. ENSATA, *Thunb. in Trans. Linn. Soc.* ii. 328.—I. graminea, *Thunb. Fl. Jap.* 34, *non Linn.*—I. biglumis, *Vahl, Enum.* ii. 149; *D. Don in Sweet, Brit. Flow. Gard.* ser. ii. t. 187.—I. triflora, *Balbis, Misc. Bot.* 6, t. 1; *Red. Lil.* t. 481.—I. Doniana, *Spach, Hist. Phan.* xiii. 34.—I. hæmatophylla, *Link, Enum. Berol.* i. 60, *non Fischer.*—I. Pallasii, *Fisch. in Trev. Ind. Sem. Hort. Vrat.* 1821; *Reich. Ic. Fl. Germ.* tab. 479. fig. 672; *Bot. Mag.* t. 2331.—I. oxypetala, *Bunge in C. A. Meyer, Ind. Pl. Mus. Petrop.* 1834, 8.—I. caricifolia, *Pallas, Rœm. & Schultes, Syst. Veg.* i. 318.—I. fragrans, *Lindl. Bot. Reg.* xxvi. t. 1.—I. longispatha, *Fisch. in Bot. Mag.* t. 2528.—I. Moorcroftiana, *Wall. Cat.* No. 5021.—Xiphion Pallasii, triflorum, *et* Donianum, *Alefeld in Bot. Zeit.* 1863, 297.—Ioniris biglumis, Doniana, fragrans, longispatha, triflora, *et* Pallasii, *Klatt in Bot. Zeit.* 1872, 502–3. *Siberia, Japonia, China borealis, Asia centralis, Himalaya occidentalis.*

16. I. GRAMINEA, *Linn. Sp. Plant.* edit. ii. 58; *Bot. Mag.* t. 681; *Red. Lil.* t. 299; *Jacq. Fl. Austr.* t. 2; *Reich, Ic. Fl. Germ.* t. 346.—Xiphion gramineum, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion gramineum, *Klatt in Bot. Zeit.* 1872, 500.—Iris Adami, *Willd. in Link, Jahrb.* iii. 72.—I. compressa, *Moench. Meth.* 529, *non Linn. fil. Europa centralis et meridionalis.*

Var. LATIFOLIA, *Spach, Veg. Phan.* xiii. 30.—I. sylvatica, *Balbis in Roem. & Schult. Syst. Veg.* i. 476.—I. bayonnensis, *Darracq. Gallia australis.*

Var. INODORA, *Spach, Veg. Phan.* xiii. 31.

17. I. SIBIRICA, *Linn. Sp. Plant.* edit. ii. 57; *Jacq. Fl. Austr.* t. 3; *Bot. Mag.* t. 60; *Red. Lil.* t. 420; *Reich. Ic. Fl. Germ.* t. 341. fig. 768.—Xiphion sibiricum, *Parl. Fl. Ital.* iii. 300.—Xyridion sibiricum, *Klatt in Bot. Zeit.* 1872, 500.—I. pratensis, *Lam. Encyc.* iii. 300; *Red. Lil.* t. 239.—I. acuta, *Willd. Enum. Berol. Suppl.* 4; *Reich. Ic. Fl. Germ.* tab. 343. fig. 770.—I. maritima, *Miller, Gard. Dict.* edit. vi. No. 11; *Reich. Ic. Germ.* tab. 342. fig. 769.—I. stricta, *Moench, Meth.* 528. *Europa centralis et meridionalis, Siberia.*

Var. I. FLEXUOSA, *Murr. in Nov. Comm. Gott.* vii. 30, t. 4.—I. sibirica, var. flexuosa, *Ker in Bot. Mag.* t. 1163; *Red. Lil.* t. 420.—Xiphion flexuosum, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion flexuosum, *Klatt in Bot. Zeit.* 1872, 500.

Var. I. ORIENTALIS, *Thunb. in Trans. Linn. Soc.* ii. 328, *non Miller.*—I. sibirica, *Thunb. Fl. Jap.* 33, *non Linn.*—I. sanguinea, *Donn, Hort. Cant.* edit. vi. 17.—I. sibirica, var. sanguinea, *Ker in Bot. Mag.* t. 1604.—I. Nertschinkia, *Lodd. Bot. Cab.* t. 1843.—I. hæmatophylla, *Fisch. in Sweet, Brit. Flow. Gard.* t. 118. *Sibiria orientalis, Japonia, America borealis occidentalis.*

Var. I. TRIGONOCARPA, *A. Braun*; *K. Koch & Bouche in Walp. Ann.* vi. 55. *Siberia.*

** *Folia ensiformia.*

18. I. MACULATA, *Baker in Gard. Chron.* 1876, ii. 517. *Mesopotamia.*

19. I. TRIDENTATA, *Pursh, Fl. Amer. Sept.* i. 30.—I. tripetala, *Hook. Bot. Mag.* t. 2886, *non Walt. Canada.*

20. I. SETOSA, *Pallas*; *Led. Fl. Ross.* iv. 96; *Regel, Gartenfl.* t. 322. —I. brachycuspis, *Fisch. Bot. Mag.* t. 2326.—Xiphion brachycuspis, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion setosum, *Klatt in Bot. Zeit.* 1872, 500. *Siberia orientalis, Japonia.*

21. I. PSEUDACORUS, *Linn. Sp. Plant.* edit. ii. 56; *Fl. Dan.* t. 494; *Eng. Bot.* t. 578, 3 edit. t. 1495; *Svensk. Bot.* t. 110; *Poit. & Turp. Fl. Par.* t. 46.—I. lutea, *Lam. Fl. Franç.* iii. 496.—I. palustris, *Moench, Meth.* 528.—I. longifolia, *DC. Fl. Franç.* iii. No. 1993.—Xiphion Pseudacorus, *Parl. Fl. Ital.* iii. 295.—Xyridion Pseudacorus, *Klatt in Bot. Zeit.* 1872, 500.—? I. curtopetala, *Red. Lil.* t. 340. *Europa tota, Syria.*

Var. I. BASTARDI, *Boreau, Fl. du Centre,* edit iii. ii. 635.

Var. I. ACORIFORMIS, *Boreau, Fl. du Centre,* edit. iii. ii. 635.

Var. I. ACOROIDES, *Spach, Hist. Phan.* xiii. 44.—Xiphion acoroides, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridium acoroideum, *Klatt in Bot. Zeit.* 1872, 500.—I. Pseudacorus, var. pallidiflora, *Bot. Mag.* t. 2339.

22. I. SPURIA, *Linn. Sp. Plant.* edit. 2, p. 58; *Bot. Mag.* t. 58; *Jacq. Fl. Austr.* t. 4; *Reich. Fl. Germ.* tab. 345. fig. 772.—Xiphion spurium, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridium spurium, *Klatt in Bot. Zeit.* 1872, 500.—I. spathulata, *Lam. Ency.* iii. 300.—I. Reichenbachiana, *Klatt in Linnæa,* xxxiv. 613.—Xyridion Reichenbachianum, *Klatt in Bot. Zeit.* 1872, 500. *Europa centralis et meridionalis, Algeria.*

Var. I. DIERINCKII, *K. Koch in Walp. Ann.* vi. 55.

Var. I. SOGDIANA, *Bunge, Rel. Lehm.* 331. *Asia centralis.*

Var. I. DAENENSIS, *Kotschy in Pl. Pers. Austr.* 1845, No. 616. *Persia.*

Var. DESERTORUM, *Ker in Bot. Mag.* t. 1514.—I. desertorum, *Gulden. Iter,* i. 80.

Var. I. NOTHA, *M. Bieb. Cent. Ross.* t. 77.—I. spuria, *Red. Lil.* t. 349. —I. halophila, *Ker in Bot. Mag.* t. 875, *non Pallas.*—I. spuria, var. major, *Ker in Bot. Mag. sub* t. 1131.—Xiphion nothum, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion nothum, *Klatt in Bot. Zeit.* 1872, 500. *Caucasus, Armenia, Kurdistan.*

23. I. Guldenstædtiana, *Lepech. in Act. Acad. Petrop.* 1781, vol. i. p. 292, t. 8.—I. halophila, *Pall. Iter*, ii. *App.* 733, *non Ker.*—salsa, *Pallas, Iter*, ii. 461.—I. desertorum, *Moench, Meth.* 529.—I. stenogyna, *Red. Lil. sub* t. 310.—I. diluta, *M. Bieb. Cent. Ross.* t. 81.—I. Gawleri, *Red. Lil.* t. 310.—I. dubia, *Poir. Ency. Suppl.* iii. 184.—Xiphion Guldenstædtii *et* stenogynum, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion halophilum, stenogynum, *et* Guldenstædtianum, *Klatt in Bot. Zeit.* 1872, 500-1. *Siberia, Asia centralis, Asia minor, Moldavia, Transylvania.*

Var. I. subbarbata, *Joo*; *Walp. Ann.* vi. 56. *Transylvania.*

24. I. ochroleuca, *Linn. Mant.* 175; *Bot. Mag.* t. 61; *Trew, Pl. Select.* t. 100; *Red. Lil.* t. 350; *Reich. Ic. Crit.* fig. 1289.—Xiphion ochroleucum, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion ochroleucum, *Klatt in Bot. Zeit.* 1872, 500.—I. orientalis, *Miller, Gard. Dict.* edit. 6, No. 9 (*Icones*, t. 154).—I. gigantea, *Carrière in Rev. Hort.* 1875, 357, cum icone. *Patria ignota.*

25. I. aurea, *Lindl. Bot. Reg.* xxxiii. t. 59.—Xyridion aureum, *Klatt in Bot. Zeit.* 1872, 501.—I. crocea, *Jacquem. MS. Himalaya occidentalis.*

26. I. Monnieri, *DC. in Red. Lil.* t. 236.—Xiphion Monnieri, *Alefeld in Bot. Zeit.* 1863, 297.—Xyridion Monnieri, *Klatt in Bot. Zeit.* 1872, 500.—I. ochroleuca, *Ker, Gen. Irid.* 48, ex parte. *Creta.*

27. I. fœtidissima, *Linn. Sp. Plant.* edit. ii. 57; *Engl. Bot.* t. 596; 3rd edit. t. 1494; *Red. Lil.* t. 354; *Reich. Ic. Germ.* t. 347. fig. 775; *Poit. & Turp. Fl. Par.* t. 45; *Reich. Ic. Crit.* t. 916.—I. fœtida, *Thunb. Diss.* No. 19.—Xiphion fœtidissimum, *Parl. Fl. Ital.* iii. 297.—Xyridion fœtidissimum, *Klatt in Bot. Zeit.* 1872, 500. *Insulæ Fortunatæ, Europa centralis et meridionalis, Asia occidentalis.*

28. I. versicolor, *Linn. Sp. Plant.* edit. 2, 57 (*Dill. Hort. Elth.* tab. 155); *Bot. Mag.* t. 21; *Red. Lil.* t. 339.—Xiphion versicolor, *Alefeld in Bot. Zeit.* 1863, 297.—I. sativa, *Mill. Gard. Dict.* edit. 6. No. 15.—I. picta, *Miller, Gard. Dict.* edit. No. 16. *America borealis orientalis.*

Var. I. virginica, *Linn. Sp. Plant.* edit. 2, p. 58; *Bot. Mag.* t. 703; *Jacq. Austr.* t. 233, *non A. Gray.*—Xiphion virginicum, *Alefeld in Bot. Zeit.* 1863, 297.—Iris caurina, *Herbert in Hook. & Arn. Fl. Bor. Amer.* ii. 206.

Var. I. flaccida, *Spach, Hist. Phan.* xiii. 41.—Xiphion flaccidum, *Alefeld in Bot. Zeit.* 1863, 297.

29. I. hexagona, *Walt. Fl. Carol.* 66.—I. virginica, *Michx.* ex parte. *America borealis orientalis.*

30. I. LONGIPETALA, *Herbert in Hook. & Arn. Bot. Beech.* 395; *Hook. fil. in Bot. Mag.* t. 5298. *California.*

31. I. LÆVIGATA, *Fisch. & Meyer, Ind. Sem. Hort. Petrop.* v. 36; *Regel, Gartenfl.* t. 442. fig. 1; *Hook. fil. in Bot. Mag.* t. 6132.—I. Gmelini, *Ledeb. Comm. Gmel.* iii. 48.—I. Kæmpferi, *Siebold*; *Lemaire, Ill. Hort.* t. 157; *Flore des Serres*, t. 2073–4; *Floral Mag.* n. s. t. 137; *Gard. Chron.* 1872, ii. t. 47.—I. itsihatsi, *Hassk. Cat. Bogor.* 35.—I. violacea, *Klatt in Linnæa*, xxxv. 384.—Xyridion lævigatum *et* violaceum, *Klatt in Bot. Zeit.* 1872, 500. *Siberia, Japonia.*

32. I. DICHOTOMA, *Linn. fil. Suppl.* 97; *Pallas, Iter, App.* No. 61, tab. A. fig. 2; *Bot. Reg.* t. 246; *Sweet, Brit. Flow. Gard.* t. 96.—I. pomeridiana, *Fischer, MS.*; *Klatt in Linnæa*, xxxiv. 612.—Pardanthus dichotomus, *Led. Fl. Ross.* iv. 106. *Davuria, China borealis.*

33. I. FULVA, *Ker in Bot. Mag.* t. 1496; *Reich. Fl. Exot.* t. 38.—Neubeckia fulva, *Alefeld in Bot. Zeit.* 1863, 297.—Isis fulva, *Tratt. Tab.* No. 669.—Iris cuprea, *Pursh, Fl. Amer. Sept.* i. 30. *America borealis orientalis.*

Subgenus II. ONCOCYCLUS. *Perianthii segmenta exteriora facie et ungue prorsus pilosa.*

34. I. SUSIANA, *Linn. Sp. Plant.* edit. 2, 55; *Bot. Mag.* t. 91; *Savi, Fl. Ital.* ii. t. 74; *Tratt. Arch. Pict.* t. 130; *Flore des Serres*, t. 1067–8. —I. punctata, *Moench, Meth.* 527.—Oncocyclus susianus, *K. Koch in Linnæa*, xxi. 639. *Oriens.*

Var. I. LIVIDA, *Tratt. Archiv. Pict.* t. 129.—I. susiana, *Red. Lil.* t. 18.

35. I. IBERICA, *Hoffm. Comm.* i. 41; *Regel, Gartenfl.* t. 386 et 713; *Flore des Serres*, t. 1963; *Floral Mag.* n. s. t. 168; *Ill. Hort.* 1872, t. 106; *Bot. Mag.* t. 5847.—Oncocyclus ibericus, *Siems. in Bot. Zeit.* 1846, 408. *Caucasus, Armenia, Persia borealis.*

Var. OCHRACEA, *Regel.*

Var. I. HEYLANDIANA, *Boiss.*

36. I. SAARII, *Schott*; *Baker in Gard. Chron.* 1876, 787. *Oriens.*

37. I. PARADOXA, *Stev. in Mém. Mosc.* v. 355; *Regel, Gartenfl.* t. 386. fig. 3.—Oncocyclus paradoxus, *Siems. in Bot. Zeit.* 1846, 706. *Georgia, Persia borealis.*

38. I. ACUTILOBA, *C. A. Meyer, Ind. Cauc.* 32; *Regel, Gartenfl.* t. 812. fig. 1.—Oncocyclus acutilobus, *Siems. in Bot. Zeit.* 1846, 709.—O. Helenæ, *K. Koch in Linn.* xxi. 639. *Caucasus, Persia borealis.*

Subgenus III. Evansia. *Perianthii segmenta exteriora unguibus cristatis.* Lophiris, *Tausch.*

39. I. cristata, *Soland. in Ait. Hort. Kew.* i. 71; *Smith, Spic.* t. 13; *Bot. Mag.* t. 412; *Red. Lil.* t. 376; *Lodd. Bot. Cab.* t. 1366.—I. odorata, *Pers. Syn.* i. 53.—Neubeckia cristata, *Alefeld in Bot. Zeit.* 1863, 297. *America borealis orientalis.*

40. I. lacustris, *Nutt. Gen. Amer.* i. 23. *Amer. bor. orient.*

41. I. gracilipes, *A. Gray, Bot. Japan,* 412. *Japonia.*

42. I. speculatrix, *Hance in Trimen's Journ.* 1875, 196. *Hong Kong.*

43. I. nepalensis, *D. Don, Prodr. Nep.* 54; *Sweet, Brit. Flow. Gard.* ser. ii., *non Wallich.*—I. decora, *Wallich, Pl. Asiat. Rar.* t. 86.—I. sulcata, *Wall. Cat.* No. 5049.—Neubeckia decora *et* sulcata, *Klatt in Linnæa,* xxxiv. 588–590. *Himalaya orientalis et occidentalis.*

44. I. japonica, *Thunb. in Trans. Linn. Soc.* ii. 327.—I. chinensis, *Curt. in Bot. Mag.* t. 373; *Regel, Gartenfl.* t. 511.—I. fimbriata, *Vent. Hort. Cels.* t. 9; *Red. Lil.* t. 152.—Isis fimbriata, *Tratt. Tabular.* 668.—Evansia chinensis, *Salisb. in Trans. Hort. Soc.* i. 303. *China, Japonia.*

Subgenus IV. Pogoniris. *Perianthii segmenta exteriora unguibus barbatis.*

* *Stirps* I. pumilæ.

45. I. pumila, *Linn. Sp. Plant.* edit. 2, 56, ex parte; *Curt. Bot. Mag.* t. 9; *Red. Lil.* t. 261; *Jacq. Fl. Austr.* t. 1; *Reich. Ic. Fl. Germ.* tab. 327. fig. 752.—I. Clusiana, *Reich. Ic. Fl. Germ.* tab. 328. fig. 755, *non Tausch.* *Europa centralis et austro-orientalis.*

Var. I. tristis, *Reich. Ic. Fl. Germ.* 3.—I. Clusiana, *Reich. Ic. Germ.* tab. 328. fig. 754.

Var. I. attica, *Boiss. & Held, Diag.* ii. iv. 91; *Regel, Gartenfl.* tab. 377. fig. 2.—I. pumila, *Reich. Ic. Fl. Germ.* tab. 327. fig. 754.

Var. I. cœrulea, *Spach, Hist. Phan.* xiii. 50.—I. pumila, var. cœrulea, *Bot. Mag.* t. 1261; *Red. Lil.* t. 261.

Var. I. stenoloba, *A. DC.* *Moldavia.*

Var. I. æquiloba, *Ledeb. Fl. Ross.* iv. 104.—I. longiflora, *Ledeb. Ind. Sem. Dorp.* 1822. *Tauria.*

46. I. suaveolens, *Boiss. Diagn.* xiii. 15. *Bulgaria.*

47. I. pseudopumila, *Tineo, Cat. Hort. Panorm.* 1827, 283; *Parl. Fl. Ital.* iii. 287. *Sicilia, Servia, Hungaria.*

Var. I. panormitana, *Todaro, Nuov. Gen.* 3. *Sicilia.*

48. I. VERNA, *Linn. Sp. Plant.* edit. 2, 58; *Sweet, Brit. Flow. Gard.* t. 68. *America borealis orientalis.*

49. I. TIGRIDIA, *Bunge in Ledeb. Fl. Alt.* i. 60; *Ledeb. Ic.* t. 342. *Siberia centralis.*

50. I. CHAMÆIRIS, *Bert. Fl. Ital.* iii. 609.—I. pumila, *Linn. herb.*!; *Vill. Delph.* ii. 224, *non Jacq.*—I. lutescens, *Red. Lil.* t. 263, *non Lam.* *Gallia australis, Italia borealis, Dalmatia.*

Var. I. ITALICA, *Parl. Fl. Ital.* iii. 185. *Italia borealis.*

Var. I. OLBIENSIS, *Henon in Ann. Soc. Agric. Lyon,* viii. 462, cum icone; *Bot. Mag.* t. 6110. *Gallia meridionalis.*

Var. I. BALKANA, *Janka, Adatok,* 173. *Thracia borealis.*

** *Stirps* I. bifloræ.

51. I. GLAUCESCENS, *Bunge in Ledeb. Fl. Alt.* i. 51; *Ledeb. Ic.* t. 102. ? I. scariosa, *Pallas*; *Roem. & Schult. Syst. Veg.* i. 307. *Siberia centralis.*

Var. I. LONGIFLORA, *Herbert, MSS.* *Siberia.*

Var. I. ELONGATA, *Fischer, MSS.* *Caucasus.*

52. I. RUBRO-MARGINATA, *Baker in Gard. Chron.* 1875, 524. *Anatolia.*

53. I. KUMAONENSIS, *Wall. Cat.* No. 5052; *D. Don in Proc. Linn. Soc.* 1849, 8.—I. longifolia, *Royle, Ill.* 372, t. 91. fig. 2.—I. tigrina, *Jacquem. MSS.* *Himalaya occidentalis.*

54. I. BIFLORA, *Linn. Sp. Pl.* edit. 2, 56.—I. subbiflora, *Brot. Fl. Lusit.* t. 98.—I. fragrans, *Salisb. in Trans. Hort. Soc.* i. 303.—I. nudicaulis, *Bot. Mag.* t. 5806, *non Lam.*—? I. longiflora, *Vest. in Roem. & Schult. Syst. Veg.* i. *Suppl.* 304. *Lusitania, Mauritania.*

55. I. LUTESCENS, *Lam. Ency.* iii. 297; *Bot. Mag.* t. 2861; *Reich. Ic. Germ.* tab. 329. fig. 756, *non Redouté.*—I. Statellæ, *Todaro, Nuov. Gen.* 5; *Hort. Panorm.* t. 6.—I. erratica, *Todaro, Nuov. Gen.* 10. *Europa meridionalis.*

56. I. VIRESCENS, *DC. in Red. Lil.* t. 295.—I. binata, *Schur, Transyl.* 656. *Helvetia, Transylvania.*

57. I. ARENARIA, *Waldst. & Kit. Fl. Rar. Hung.* t. 57; *Bot. Reg.* t. 549; *Red. Lil.* t. 296; *Reich. Ic. Fl. Germ.* tab. 330. fig. 757. *Europa centralis orientalis.*

58. I. FLAVISSIMA, *Pallas*; *Jacq. Ic.* t. 220. *Siberia centralis.*

59. I. BLOUDOVII, *Led. Fl. Alt.* iv. 331; *Ic.* t. 101.—I. flavissima, var. umbrosa, *Bunge in Ledeb. Fl. Alt.* i. 59. *Siberia centralis.*

60. I. GONIOCARPA, *Baker in Gard. Chron.* 1876, ii. 710. *Himalaya orientalis.*

61. I. KOROLKOWI, *Regel, Enum. Plant. Nov. Turkest.* 32; *Gartenfl.* tab. 766. *Turkestania.*

62. I. HAYNEI, *Baker in Gard. Chron* 1876, ii. 710. *Palæstina.*

*** *Stirps* I. variegatæ.

63. I. APHYLLA, *Linn. Sp. Plant.* edit. 2, 56.—I. nudicaulis, *Lam. Encyc.* iii. 296; *Reich. Ic. Germ.* tab. 331. fig. 758.—I. bohemica, *F. W. Schmidt, Fl. Bohem. Cent.* iv. 5.—I. hungarica, *Waldst. & Kit. Plant. Rar. Hung.* tab. 226.—I. biflora, *Reich. Ic. Fl. Germ.* tab. 332. fig. 759, *non Linn.*—I. bisflorens, *Hort. Fl. Austr.* i. 46.—I. furcata, *M. Bieb. Fl. Taur. Cauc.* iii. 42; *Bot. Mag.* tab. 2361; *Bot. Reg.* tab. 801.—I. Clusiana, *Tausch*; *Klatt in Linnæa,* xxxiv. 598.—I. falcata, *Tausch*; *Roem. & Schult. Syst. Veg.* i. *Suppl.* 369.—I. scariosa, *Willd.*; *Roem. & Schult. Syst. Veg.* i. *Suppl.* 305.—I. Fieberi, *Siedl. in Oek. tech. Fl. Böhm.* i. 48; *Reich. Ic. Fl. Germ.* tab. 333. fig. 760.—I. rigida, *et* subtriflora, *Fieber*; *Klatt in Linnæa,* xxxiv. 598–9.—I. diantha, *K. Koch in Linnæa,* xxi. 637.—I. extrafoliacea, *Mikan.*—I. Schmidtii, *Hort.*—I. bifurca, *Steven, MSS. Europa centralis orientalis, Caucasus.*

64. I. VARIEGATA, *Linn. Sp. Plant.* edit. 2, 56; *Jacq. Fl. Austr.* t. 5; *Curt. Bot. Mag.* t. 16; *Red. Lil.* t. 292; *Reich. Ic. Fl. Germ.* tab. 334. fig. 761. *Europa centralis orientalis.*

Var. BELGICA, *Spach, Hist. Phan.* xiii. 57.

65. I. LURIDA, *Soland. in Ait. Hort. Kew.* i. 68; *Bot. Mag.* t. 986, *non* 669; *Red. Lil.* t. 418. *Europa centralis orientalis.*

Var. I. REDOUTEANA, *Spach, Hist. Phan.* xiii. 56.

**** *Stirps* I. germanicæ.

66. I. FLAVESCENS, *DC. in Red. Lil.* t. 375; *Sweet, Brit. Flow. Gard.* ser. ii. 56; *Reich. Ic. Crit.* t. 921.—I. imbricata, *Lindl. Bot. Reg.* 1845, t. 35.—I. sulphurea, *K. Koch in Linnæa,* xxi. 637. *Bosnia, Caucasus.*

67. I. SQUALENS, *Linn. Sp. Plant.* edit. 2, 56; *Bot. Mag.* t. 787; *Jacq. Fl. Austr.* t. 5; *Reich. Ic. Crit.* t. 993; *Ic. Fl. Germ.* tab. 336.—I. lurida, *Bot. Mag.* t. 669; *Reich. Ic. Fl. Germ.* tab. 337. fig. 764.—I. lepida, *Heuffel in Flora,* 1856, 621. *Europa centralis, Caucasus, Persia borealis.*

Var. LAVANDULACEA, *Baker in Gard. Chron.* 1876, ii. 774.

Var. ATROPURPUREA, *Baker, loc. cit.*

68. I. SAMBUCINA, *Linn. Sp. Plant.* edit. 2, 55; *Jacq. Hort. Vind.* t. 2; *Curt. Bot. Mag.* t. 187; *Reich. Ic. Fl. Germ.* tab. 335. fig. 762. *Europa centralis, Armenia.*

Var. I. CONCOLOR, *Baker in Gard. Chron.* 1876, ii. 774.

69. I. NEGLECTA, *Horn. Hort. Hafn.* i. 55; *Bot. Mag.* t. 2435. *Stirps hortensis.*

70. I. HYBRIDA, *Retz. Obs. Bot.* iv. 6.—I. amœna, *DC. in Red. Lil.* t. 336; *Sweet, Brit. Flow. Gard.* ser. ii. t. 165.—I. variegata, var. amœna, *Spach, Hist. Phan.* xiii. 58. *Stirps hortensis.*

71. I. GERMANICA, *Linn. Sp. Plant.* edit. 2, 55; *Bot. Mag.* t. 670; *Red. Lil.* t. 309; *Reich. Ic. Crit.* t. 924; *Ic. Fl. Germ.* tab. 338. fig. 565.—I. deflexa, *Knowles & Westc. Floral Cab.* ii. 19, t. 51.—I. nepalensis, *Wall. in Lindl. Bot. Reg.* t. 818, *non D. Don.*—I. violacea, *Savi, Bot. Etrusc.* ii. 9. *Europa centralis et meridionalis.*

***** *Stirps* I. pallidæ.

72. I. FLORENTINA, *Linn. Sp. Plant.* edit. 2, 55; *Bot. Mag.* t. 671; *Red. Lil.* t. 23; *Sibth. Fl. Græc.* t. 39; *Reich. Ic. Pl. Germ.* tab. 339. fig. 766; *Woodville, Med. Bot.* iv. t. 263; *Bentley & Trimen, Med. Plants,* t. 273.—I. alba, *Savi, Fl. Pis.* i. 32. *Europa meridionalis.*

Var. I. ALBICANS, *Lange, Ic. Plant. Hisp.* t. 33. *Hispania.*

73. I. PALLIDA, *Lam. Encyc.* iii. 294; *Bot. Mag.* tab. 685; *Red. Lil.* t. 366; *Reich. Ic. Crit.* fig. 1243; *Ic. Fl. Germ.* tab. 340. fig. 767.—I. germanica, *Sibth. & Sm. Fl. Græc.* t. 40, *non Linn.*—I. pallide-cærulea, *Pers. Syn.* i. 51.—I. odoratissima, *Jacq. Hort. Schoen.* tab. 9.—I. glauca, *Salisb. in Trans. Hort. Soc.* i. 302.—I. hortensis, *Tausch.*—? I. Cengialti, *Ambrosi, Fl. Tyrol. Austr.* i. 643. *Europa meridionalis, Oriens.*

Var. I. JUNONIA, *Schott & Kotschy in Œster. Bot. Wochen.* 1854, 209. *Cilicia.*

Var. I. CUCULLATA, *Schur, Fl. Transyl.* 654. *Transylvania.*

Var. I. AUSTRALIS, *Todaro, Nuov. Gen.* 49. *Sicilia.*

Var. I. MANDRALISCÆ, *Todaro, Nuov. Gen.* 42. *Sicilia.*

Var. I. TINÆI, *Todaro, Nuov. Gen.* 42. *Sicilia.*

Var. I. SICULA, *Todaro, Nuov. Gen.* 7. *Sicilia.*

74. I. PLICATA, *Lam. Encyc.* iii. 294.—I. aphylla, var. plicata, *Ker in Bot. Mag.* t. 870. *Stirps hortensis.*

75. I. SWERTII, *Lam. Encyc.* iii. 294 (*Swert, Floril.* tab. 41. fig. 1); *Red. Lil.* t. 306; *Reich. Ic. Crit.* fig. 1239; *Sweet, Brit. Flow. Gard.*

ser. ii. t. 254.—I. aphylla, var. Swertii, *Ker in Bot. Mag. sub* t. 870. —I. desertorum, *Balbis, Hort. Taur.* t. 2, *non Moench.*—I. portugalensis, *Besler. Stirps hortensis.*

Subgenus V. HEXAPOGON. *Perianthii segmenta omnia unguibus barbatis.*

76. I. LONGISCAPA, *Ledeb. Fl. Ross.* iv. 93.—I. filifolia, *Bunge, Rel. Lehm.* 330. *Asia centralis, Siberia uralensis.*

77. I. FALCIFOLIA, *Bunge, Rel. Lehm.* 329. *Asia centralis, Afghanistan.*

Series II. DIETES, *Salisb. Species austro-africanæ et australienses, perianthii tubo nullo, segmentis omnibus flore expanso late patulis.* Moræa, *Miller, ex parte.*

* *Africanæ.*

78. I. COMPRESSA, *Linn. fil. Suppl.* 98.—Moræa iridoides, *Linn. Mant.* 28; *Ker in Bot. Mag.* t. 693; *Jacq. Hort. Schoen.* t. 196 (excl. syn.). —M. vegeta, *Miller, Gard. Dict.* edit. 6 (*Ic.* t. 239. fig. 1), *non Linn. herb.*—M. irioides, *Gaertn. Fruct.* i. 40.—Iris moræoides, *Ker in Bot. Mag. sub* t. 1407.—Dietes iridifolia, *Salisb. in Trans. Hort. Soc.* i. 307.—D. iridoides, *Sweet, Brit. Flow. Gard.* edit. 2, 497.—D. compressa, *Klatt in Linnæa,* xxxiv. 585.—Iris crassifolia, *Lodd. Bot. Cab.* t. 1861. *C. B. Spei.*

79. I. CATENULATA, *Baker.*—Moræa catenulata, *Ker in Bot. Reg.* t. 1074.—Dietes catenulata, *Sweet, Brit Flow. Gard.* edit. 2, 497. *Madagascaria.*

80. I. BICOLOR, *Lindl. Bot. Reg.* t. 1404; *Lodd. Bot. Cab.* t. 1886; *Paxt. Mag.* ix. 29.—Moræa bicolor, *Spae in Flore des Serres,* t. 744. —Dietes bicolor, "*Sweet,*" *Klatt in Linnæa,* xxxiv. 584. *C. B. Spei.*

** *Australiensis.*

81. I. ROBINSONIANA. *F. Muell. Fragm.* vii. 153; *G. Bennett in Gard. Chron.* 1872, 393, *cum icone.*—Moræa Robinsoniana, *F. M. loc. cit.*; *Benth. Fl. Austral.* vi. 409. *Insula Lord Howe.*

48. HERMODACTYLUS, *Tourn.*

Tourn. Coroll. 50; *Adans. Fam.* ii. 60; *Salisb. in Trans. Hort. Soc.* i. 304; *Klatt in Linnæa,* xxxiv. 582.—Iridis sp., *Linn. etc.*

Perianthium regulare erectum, tubo supra ovarium brevissimo infundibulari, segmentis exterioribus obovato-spathulatis, unguibus calvis, flore expanso apice reflexis, interioribus multo minoribus erectis oblanceolato-spathulatis. *Stamina* 3 ad faucem perianthii inserta stigmatibus opposita, antheris ligulatis basifixis filamento æquilongis. *Ovarium* uniloculare, placentis tribus parietalibus, ovulis plurimis; *stylus* brevissimus, stigmatibus tribus magnis petaloideis apice 2-cristatis. *Capsula* coriacea unilocularis apice loculicide trivalvis, seminibus globosis, testa crassa brunnea, albumine corneo. *Herba perennis mediterranea, rhizomate digitato, foliis paucis tetragonis, caule debili elongato simplici unifloro, spatha sæpissime univalvi, floribus sordide purpureis flavo-viridibus.*

1. H. TUBEROSUS, *Salisb. in Trans. Hort. Soc.* i. 304.—Iris tuberosa, *Linn. Sp. Plant.* edit. 58; *Bot. Mag.* t. 531; *Red. Lil.* t. 48; *Sibth. & Sm. Fl. Græc.* t. 41; *Eng. Bot.* edit. 3, t. 1496; *Flore des Serres,* t. 1083; *Reich. Ic. Germ.* t. 348.—H. repens, *Sweet, Brit. Flow. Gard.* 2nd ser. *sub* t. 146. *Regio mediterranea.*

Var. H. LONGIFOLIUS, *Sweet, Brit. Flow. Gard.* ser. ii. t. 146.—Iris longifolia, *Spach, Hist. Phan.* xiii. 14.

Var. H. BISPATHACEUS, *Sweet, loc. cit.* (*Bot. Mag.* t. 531).—Iris bispathacea, *Spach, Hist. Phan.* xiii. 15.

49. DIPLARRHENA, *Labill.*

Labill. Voy. i. 157, t. 15; *R. Br. Prodr.* 304; *Ker, Gen. Irid.* 44; *Klatt in Linnæa.* xxxiv. 586; *Benth. Fl. Austral.* vi. 399.—Moreæ sp., *Vahl.*

Perianthium subregulare leviter obliquum, tubo supra ovarium nullo, segmentis dissimilibus, tribus exterioribus æqualibus majoribus obovato-cuneatis obtusis flore expanso falcatis, interioribus minoribus obtusis cuneatis supremo latiore leviter fornicato. *Stamina* 3 epigyna inæqualia, cum perianthii segmento interiore supremo arcuato, 2 fertilia filamentis subulatis antheris parvis oblongo-ligulatis, tertium sterile longiore appendice apicali petaloidea. *Ovarium* clavatum, ovulis in loculo crebris; *stylus* brevis filiformis, ramis tribus angustis petaloideis apice emarginatis cuspidibus brevibus patulis. *Capsula* coriacea anguste oblonga trigona apice loculicide trivalvis, seminibus discoideis uniseriatis, testa atro-castanea, albumine corneo. *Herbæ perennes australienses, rhizomate brevi, foliis rosulatis distichis duris linearibus, caulibus ancipitibus simplicibus vel parce ramosis foliis paucis reductis præditis, spathis paucifloris valvis exterioribus lanceolatis acutis firmis viridibus striatis,* *pedicellis cum spatha æquilongis, floribus fugitivis successivis magnitudine mediocribus sæpissime albis. Ab* Irideis *ad* Gladeoleas *recedit perianthii segmento interiore supremo fornicato et staminibus inæquilateralibus.*

1. D. MORÆA, *Lab. loc. cit.*—Moræa diandra, *Vahl, Enum.* ii. 154. *Tasmania, Australia australis orientalis.*

Var. ALPINA, *Hook. fil. Fl. Tasm.* ii. 34. *Tasmania.*

2. D. LATIFOLIA, *Benth. Fl. Austral.* vi. 400. *Tasmania.*

50. MARICA, *Ker.*

Ker, Gen. Irid. 16, *ex parte*; *Herbert in Bot. Mag.* t. 3809.—Cypella, *Klatt in Linnæa,* xxxi. 538, *non Herbert.*—Galathea, *Liebm. Ind. Sem. Havn.* 1855.—Morææ *et* Ferrariæ sp. *auct. vet.*

Perianthium regulare erectum, tubo supra ovarium nullo, segmentis valde difformibus omnibus basi maculatis, exterioribus obovato-cuneatis obtusis flore expanso patulis, interioribus lanceolato-panduriformibus acutis multo minoribus diu convolutis. *Stamina* 3 erecta epigyna perianthio multo breviora, filamentis erectis brevibus liberis basi deltoideis, antheris ligulatis basifixis dorso styli ramis adglutinatis. *Ovarium* clavatum triloculare, ovulis in loculo crebris; *stylus* brevis inferne filiformis superne trigonus lobis supra stigmata cristis tribus subulatis inæqualibus præditis. *Capsula* oblongo-trigona coriacea loculicide trivalvis, seminibus crebris angulatis, testa brunnea, albumine corneo. *Herbæ tropicales americanæ, rhizomate brevi, foliis coriaceis elongatis ensiformibus, caulibus planis latis folia simulantibus, ramis floriferis solitariis lateralibus, spathis paucifloris, valvis lanceolatis coriaceis viridibus, floribus magnis successivis fugitivis luteis, cæruleis vel albidis.*

1. M. CÆRULEA, *Ker in Bot. Reg.* t. 713; *Hook. Exot. Flora,* t. 222.—Cypella cærulea, *Seubert*; *Klatt in Linnæa,* xxxi. 538; *Fl. Bras.* iii. 519, t. 66. fig. 2; *Bot. Mag.* t. 5162.—Galathea cærulea, *Liebm. Ind. Sem. Havn.* 1855. *Brasilia.*

2. M. GLAUCA, *Baker.*—Cypella glauca, *Seubert*; *Klatt in Linnæa,* xxxi. 542. *Brasilia.*

3. M. SABINI, *Lindl. in Trans. Hort. Soc.* vi. 75, t. 1; *Lodd. Bot. Cab.* t. 1164.—M. Sabiniana, *Herb. in Bot. Mag. sub* t. 3809. *Africa tropicalis occidentalis* (*inquilina*).

4. M. NORTHIANA, *Ker in Bot. Mag.* t. 654.—Moræa Northiana,

Schneev. Ic. t. 41, 42; *Andr. Bot. Rep.* t. 255.—Cypella Northiana, *Klatt in Linnæa*, xxxi. 539.—Iris Northiana, *Pers. Syn.* i. 52.—Moræa vaginata, *Red. Lil.* t. 56.—Ferraria elegans, *Salisb. Prodr.* 42. *Brasilia.*

5. M. GRACILIS, *Herb. in Bot. Mag.* t. 3713.—Cypella gracilis, *Klatt in Linnæa*, xxxi. 541. *Brasilia.*

6. M. LUTEA, *Herb. in Bot. Mag.* t. 3809.—Cypella lutea, *Klatt in Fl. Bras.* iii. 522. *Brasilia.*

7. M. LONGIFOLIA, *Link, Klotzsch & Otto Ic. Pl. Select.* 123, t. 58.—Cypella longifolia, *Klatt in Linnæa*, xxxi. 540. *Brasilia.*

8. M. HUMILIS, *Lodd. Bot. Cab.* t. 1801.—M. humilis, var. princeps, *Herb. in Bot. Mag. sub* t. 3809.—Cypella humilis, *Klatt in Linnæa*, xxxi. 540. *Brasilia.*

9. M. BRACHYPUS, *Baker.*—Cypella brachypus, *Baker in Gard. Chron.* 1876, 136. *India occidentalis.*

51. PATERSONIA, *R. Brown.*

R. Brown, Prodr. Fl. Austral. 304; *Ker, Gen. Irid.* 14; *Klatt in Linnæa*, xxxiv. 630; *Benth. Fl. Austral.* vi. 400.—Genosiris, *Labill. Nov. Holl.* i. 13, t. 9; *F. Muell. Fragm.* vii. 36.

Perianthium regulare erectum, tubo supra ovarium producto recto filiformi, segmentis exterioribus magnis obtusis obovatis vel oblongis flore expanso patulis, tribus interioribus minimis lanceolatis ascendentibus. *Stamina* 3, ad faucem tubi æquilateraliter inserta, filamentis in tubum cylindricum ad medium vel prorsus connatis, antheris erecto-patentibus oblongis stigmatibus alternis. *Ovarium* cylindricum sessile triloculare sæpe villosum, ovulis in loculo crebris; *stylus* filiformis erectus, stigmatibus tribus obovatis petaloideis patulis basi liberis vel connatis. *Capsula* cylindrica sessilis chartacea loculicide trivalvis, seminibus parvis turgidis dimidiato-oblongis, testa membranacea atro-castanea, albumine corneo. *Herbæ australienses duræ persistentes perennes glabræ vel tomentosæ, rhizomate brevi fibris radicalibus duris gracilibus prædito, foliis dense cæspitosis coriaceis anguste linearibus subtiliter striatis (in* P. babianoidi *plicatis petiolatis), scapis nudis, floribus fugitivis successivis in caput cylindricum unicum terminale congestis, bracteis multis imbricatis lanceolatis, exterioribus duris striatis, interioribus membranaceis, perianthio sæpissime cæruleo raro luteo vel albo.*

1. P. GLAUCA, *R. Brown, Prodr. Fl. Austral.* 304; *Bot. Mag.* t. 2677;

Lodd. Bot. Cab. t. 1182; *Endl. Icon.* t. 50.—Genosiris fragilis, *Labill. Pl. Nov. Holl.* i. 13, t. 9. *Tasmania et Australia australis orientalis.*

2. P. LONGISCAPA, *Sweet, Fl. Austral.* t. 39.—P. bicolor, *F. Muell. MSS. Tasmania et Australia australis.*

3. P. OCCIDENTALIS, *R. Brown, Prodr. Austral.* 304.—Genosiris occidentalis, *F. Muell. Frag.* vii. 31.—P. sapphirina, *Lindl. Bot. Reg.* 1839, t. 60.—P. Diesingii, *Endl. in Pl. Preiss.* ii. 30.—? P. nana, compar, flaccida, sylvestris *et* montana, *Endl. in Pl. Preiss.* ii. 30, 31. *Australia occidentalis,*

Var. LATIFOLIA, *Benth. Fl. Austral.* vi. 403. *Australia occid.*

Var. ? ANGUSTIFOLIA, *Benth. loc. cit.*—P. tenuispatha *et* turfosa, *Endl. in Pl. Preiss.* ii. 31. *Australia occid.*

Var. ? ERIOSTEPHANA, *F. Muell. Fragm.* vii. 32. *Austr. occid.*

4. P. UMBROSA, *Endl. in Pl. Preiss.* ii. 31.—Genosiris umbrosa, *F. Muell. Frag.* vii. 32. *Australia occidentalis.*

5. P. XANTHINA, *F. Muell. Fragm.* i. 214.—Genosiris xanthina, *F. Muell. Fragm.* vii. 33. *Australia occidentalis.*

6. P. LIMBATA, *Endl. in Pl. Preiss.* ii. 29. *Australia occidentalis.*

7. P. JUNCEA, *Lindl. Swan Riv. App.* 58.—Genosiris juncea, *F. Muell. Fragm.* vii. 33.—? P. Roei, *Endl. in Pl. Preiss.* ii. 31. *Australia occidentalis.*

Var. ELONGATA, *Benth. Fl. Austral.* vi. 405. *Australia occidentalis.*

8. P. MAXWELLII, *F. Muell. in Benth. Fl. Austral.* vi. 405.—Genosiris Maxwellii, *F. Muell. Fragm.* vii. 34. *Australia occidentalis.*

9. P. PYGMÆA, *Lindl. Swan. Riv. App.* 58.—Genosiris pygmæa, *F. Muell. Frag.* vii. 33. *Australia occidentalis.*

10. P. LONGIFOLIA, *R. Brown, Prodr. Fl. Austral.* 303.—Genosiris longifolia, *F. Muell. Frag.* vii. 35. *Austral. orient. australis.*

11. P. SERICEA, *R. Brown in Bot. Mag.* t. 1041; *Prodr. Fl. Austr.* 303. —Genosiris sericea, *F. Muell. Fragm.* vii. 35.—? P. glabrata, *Bot. Reg.* t. 51, *non R. Br. Australia orientalis.*

Var. ? LATIFOLIA, *Benth. Fl. Austral.* vi. 406. *Austral. orient.*

12. P. LANATA, *R. Brown, Prodr. Fl. Austral.* 303; *Sweet, Fl. Austr.* t. 15.—Genosiris lanata, *F. Muell. Fragm.* vii. 35. *Australia occidentalis.*

Var. P. PANNOSA, *Endl. Pl. Preiss.* ii. 29. *Austral. occid.*

13. P. RUDIS, *Endl. in Pl. Preiss.* ii. 29.—Genosiris rudis, *F. Muell. Fragm.* vii. 35. *Australia occidentalis.*

14. P. MACRANTHA, *Benth. Fl. Austral.* vi. 407. *Austral. occid.*

15. P. GLABRATA, *R. Brown, Prodr. Fl. Austral.* 304; *Lodd. Bot. Cab.*

t. 768.—Genosiris glabrata, *F. Muell. Frag.* vii. 35.—P. media, *R. Brown, loc. cit. Australia orientalis.*

16. P. Drummondii, *F. Muell. in Benth. Fl. Austral.* vi. 407. *Austral. occid.*

17. P. inæqualis, *Benth. Fl. Austral.* vi. 408. *Austral. occid.*

18. P. graminea, *Benth. Fl. Austral.* vi. 408. *Austral. occid.*

19. P. babianoides, *Benth. Fl. Austral.* vi. 408. *Austral. occid.*

52. Libertia, *Spreng.*

Spreng. Syst. Veg. i. 127; *Klatt in Linnæa,* xxxi. 380.—Renealmia, *R. Brown, Prodr. Fl. Austral.* 591; *Ker, Gen. Irid.* 26, *non Linn. fil.*—Nematostigma, *D. Dietr. Synops.* i. 150.—Sisyrinchii sp., *R. Brown, Prodr.* 305; *F. Muell. Frag.* vii. 91.

Perianthium rotatum, regulare, erectum, tubo supra ovarium nullo, segmentis flore expanso patulis, sæpissime inæqualibus interioribus majoribus, exterioribus minoribus magis brunneolis vel viridulis. *Stamina* æquilateralia epigyna, filamentis sursum subulatis deorsum connatis, antheris oblongo-ligulatis versatilibus, stigmatibus alternis. *Ovarium* subglobosum, ovulis in loculo plurimis; *stylus* filiformis profunde trifurcatus, ramis subulatis integris falcatis apice capitato-stigmatosis. *Capsula* parva coriacea globosa vel obovoidea loculicide trivalvis, seminibus minutis triquetris, testa membranacea brunnea, albumine corneo. *Herbæ perennes australienses, novæ-zelandicæ et americanæ austro-occidentales, radicibus fibrosis, foliis radicalibus distichis anguste linearibus firmis dense congestis, caulibus teretibus foliis paucis valde reductis instructis, inflorescentia sæpissime laxe corymboso-paniculata spathis paucifloris, valvis paucis lanceolatis pedicellis elongatis, interdum minus ramosa, floribus dense congestis pedicellis brevibus, perianthio albo, raro cæruleo, haud fugitivo.*

* *Laxifloræ, pedicellis productis.*

1. L. pulchella, *Spreng. Syst.* i. 169.—Sisyrinchium pulchellum, *R. Br. Prodr.* 305.—Renealmia pulchella, *R. Brown, Prodr.* 592.—Nematostigma pulchellum, *Dietr. Synops.* 151.—Libertia micrantha, *A. Cunn. in Hook. fil. Flor. New Zeal.* i. 252.—L. Lawrencii, *Hook. fil. Fl. Tasm.* ii. 34, t. 129. *Nova Zealandia, Tasmania, Australia austro-orientalis.*

2. L. tricocca, *Philippi in Linnæa,* xxix. 63. *Chili.*

3. L. ixioides, *Spreng. Syst.* i. 168; *Reich. Hort.* t. 157.—Sisyrin-

chium ixioides, *Forst. Prodr.* No. 325.—Moræa ixioides, *Thunb. Diss Moræa*, No. 7.—Ferraria ixioides, *Willd. Sp. Plant.* iii. 588.—Renealmia ixioides, *Ker, Gen. Irid.* 27.—Nematostigma ixioides, *Dietr. Synops.* 150.—L. restioides, *Klatt in Linnæa*, xxxi. 383. *Nova Zealandia.*

4. L. ELEGANS, *Poepp. Frag. Synops.* 1.—L. ixioides, *C. Gay, Fl. Chil.* vi. 31, *non Spreng.*—Roterbe elegans, *Steud. in Lechl. Pl. Chil. Exsic.* No. 569.—L. chilensis, *Klotzsch, MSS.*—Marica micrantha, *Ker, Gen. Irid.* 22.—Bermudiana Narcisso-Leucoji flore, *Feuill. Peruv.* iii. 9, t. 4. *Chili.*

5. L. PANICULATA, *Spreng. Syst.* i. 168; *Bot. Mag.* t. 6263.—Sisyrinchium paniculatum, *R. Br. Prodr.* 305.—Renealmia paniculata, *R. Br. Prodr.* 592.—Nematostigma paniculatum, *Dietr. Synops.* 151. *Australia orientalis et australis.*

6. L. GRANDIFLORA, *Sweet, Hort. Brit.* edit. 1, 498.—Renealmia grandiflora, *R. Br. Prodr.* 592.—Libertia macrocarpa, *Klatt in Linnæa*, xxxi. 384. *Nova Zealandia.*

** *Densifloræ, pedicellis brevibus.*

7. L. FORMOSA, *Grah. in Edinb. New Phil. Journ.* xv. 383; *Lindl. in Bot. Reg.* t. 1630; *Bot. Mag.* t. 3294.—L. ixioides, *Klatt in Mart. Fl. Bras.* iii. 530, tab. 68. fig. 2, *non Spreng.* *Chili.*

Var. L. CRASSA, *Grah. loc. cit.* *Chili.*

8. L. CŒRULESCENS, *Kunth in Linnæa*, xix. 382.—Sisyrinchium sessiliflorum, *Hook. & Arn. Bot. Beechey*, 47. *Chili.*

53. ANOMATHECA, *Ker.*

Ker in König & Sims, Ann. i. 227; *Gen. Irid.* 111; *Klatt in Linnæa*, xxxii. 774.—Gladiolæ *et* Ixiæ sp. *auct. vet.*

Perianthium subregulare vel leviter irregulare tubo supra ovarium elongato cylindrico leviter curvato, segmentis oblongis subæqualibus flore expanso irregulariter patulis, tribus inferioribus magis patulis, fauce maculatis. *Stamina* 3 ad faucem tubi inserta secunda arcuata, filamentis brevibus filiformibus, antheris linearibus basifixis contiguis parallelis. *Ovarium* oblongum, triloculare, ovulis in loculo pluribus crebris; *stylus* filiformis, ex tubo protrusus, stigmatibus tribus brevibus subulatis bifidis ramis divaricatis. *Capsula* parva oblonga vel globosa membranacea loculicide trivalvis, seminibus globosis, testa atro-castanea membranacea nitida, albumine corneo. *Herbæ capenses et africanæ tropicales, bulbi tunicis subtiliter fibroso-reticulatis, foliis *radicalibus graminoideis flabellatis, caulinis paucis reductis, floribus laxe spicatis, spathis unifloris, valvis parvis lanceolatis acutis integris viridibus, floris limbo albido vel rubro. A* Lapeyrousia *præsertim recedit foliis radicalibus congestis flabellatis et floribus in spicam unicam vel profunde furcatam dispositis.*

1. A. JUNCEA, *Ker in König & Sims, Ann.* i. 227; *Reich. Hort.* t. 111.—Gladiolus junceus, *Linn. Suppl.* 94; *Red. Lil.* t. 141.—Lapeyrousia juncea, *Pourr. Act. Tolos.* iii. 15.—Ixia spicata, *Burm. Fl. Cap.* i. (1768).—Gladiolus polystachyus, *Andr. Bot. Rep.* t. 66.—G. marmoratus, *Lam. Ill.* i. 118.—G. paniculatus, *Pers. Syn.* i. 45.—G. excisus, *Jacq. Hort. Schoen.* t. 491.—Ixia excisa, *Linn. Suppl.* 92, *non Thunb.*—Ixia Gawleri, *Schrad. Journ.* iv. 67.—Gladiolus amabilis, *Salisb. Prodr.* 4.—Ixia emarginata, *Vahl, Enum.* ii. 270.—Gladiolus setifolius, *Linn. Suppl.* 96. *C. B. Spei.*
2. A. CRUENTA, *Lindl. Bot. Reg.* t. 1639; *Lodd. Bot. Cab.* t. 1857; *Paxt. Mag.* i. 103, *cum icone. C. B. Spei, Natal.*
3. A. GRANDIFLORA, *Baker in Trimen's Journ.* 1876, 337. *Africa austro-tropicalis in terra fluminis Zambesi.*
4. A. ANGOLENSIS, *Baker in Trimen's Journ.* 1876, 337. *Angola.*

54. LAPEYROUSIA, *Pourret.*

Pourret in Trans. Acad. Tolos. iii. 79, t. 6 (1788); *Ker, Gen. Irid.* 107, *non Thunb.* (1800).—Ovieda, *Spreng. Syst. Veg.* i. 147; *Klatt in Linnæa*, xxxii. 776.—Meristostigma, *Dietrich, Synops.* i. 126.—Peyrousia, *Sweet, Hort. Brit.* edit. 2, 499.—Sophronia, *Licht. in Roem. & Schultes's Syst. Veg.* i. 482.—Gladioli *et* Ixiæ sp., *Thunb. etc.*

Perianthium subregulare vel leviter irregulare, tubo supra ovarium cylindrico brevi vel elongato plus minus curvato, segmentis oblongo-spathulatis fauce maculatis subæqualibus vel 3 inferioribus minoribus flore expanso magis patulis. *Stamina* 3 ad faucem tubi inserta, filamentis arcuatis brevibus filiformibus sæpissime contiguis parallelis, antheris oblongis basifixis. *Ovarium* triloculare, ovulis in loculo crebris; *stylus* filiformis, ex tubo breviter protrusus, stigmatibus brevibus subulatis bifidis ramis divaricatis. *Capsula* parva oblonga vel globosa torulosa membranacea loculicide trivalvis, seminibus crebris minutis globosis, testa brunnea membranacea, albumine corneo. *Herbæ bulbosæ capenses et africanæ tropicales, bulbi tunicis membranaceis vel fibroso-reticulatis basi circumscissis, foliis paucis* *superpositis linearibus vel loratis caulinis sensim reductis, caulibus sæpe productis ancipitibus profunde furcatis floribus copiosis corymboso-paniculatis, ramis ultimis spicatis, spathis unifloris valvis 2 latis navicularibus viridibus, floribus limbo parvo rubro, cæruleo vel albido.*

* *Brevicolles.*

1. L. CORYMBOSA, *Ker in König & Sims, Ann.* i. 237; *Bot. Mag.* t. 595. —Ixia corymbosa, *Linn. Sp. Plant.* i. 51; *Jacq. Ic.* t. 288; *Houtt. Handl.* xi. 27, t. 77. fig. 1.—Ovieda corymbosa, *Spreng. Syst. Veg.* i. 147.—Peyrousia corymbosa, *Sweet, Hort Brit.* edit. 2, 499.—Meristostigma corymbosum, *Dietr. Synop.* i. 161.—Ixia crispifolia, *Andr. Bot. Rep.* t. 35.—I. fastigiata, *Lam. Encyc.* iii. 337.—Lapeyrousia fastigiata, *Ker in König & Sims, Ann.* i. 237.—L. azurea, *Eckl. Top. Verz.* 41; *Plukenet, Alm.* t. 275. fig. 1. *C. B. Spei.*

2. L. PURPUREO-LUTEA, *Baker.*—Ovieda purpureo-lutea, *Klatt in Linnæa,* xxxii. 789. *C. B. Spei.*

3. L. ERYTHRANTHA, *Baker.*—Ovieda erythrantha, *Klotzsch in Peters, Mossamb. Bot.* 516, t. 18. *Africa tropicalis austro-orientalis.*

4. L. ABYSSINICA, *Baker.*—Geissorhiza abyssinica, *R. Brown in App. Salt's Travels.*—Montbretia abyssinica, *Hochst. in Schimp. Pl. Abyss.* No. 329.—M. gallabatensis, *Schwein. in Pl. Gallab. Exsic.* No. 1. *Abyssinia, Gallabat, Angola.*

5. L. MACROCHLAMYS, *Baker in Trimen's Journ.* 1876, 338. *C. B. Spei.*

6. L. DIVARICATA, *Baker in Trimen's Journ.* 1876, 337. *C. B. Spei.*

** *Longicollis acaulis* (Sophronia, *Licht.*).

7. L. FASCICULATA, *Ker in König & Sims, Ann.* i. 237.—Ovieda fasciculata, *Spreng. Syst.* i. 147.—Galaxia plicata, *Jacq. Ic.* t. 292.—Ixia heterophylla, *Willd. Sp. Plant.* i. 159.—Meristostigma heterophyllum, *Dietr. Synops.* i. 161. *C. B. Spei.*

*** *Longicolles caulescentes.*

8. L. FISTULOSA, *Baker.*—Ovieda fistulosa, *Spreng*; *Klatt in Linnæa,* xxxii. 781. *C. B. Spei.*

9. L. FISSIFOLIA, *Ker in König & Sims, Ann.* i. 237; *Bot. Mag.* t. 1246. —Gladiolus fissifolius, *Jacq. Ic.* t. 268.—Ovieda fissifolia, *Spreng. Syst.* i. 147.—Meristostigma fissifolia, *Dietr. Synops.* i. 161.—Peyrousia fissifolia, *Sweet, Hort. Brit.* edit. 2, 499.—Gladiolus bracteatus, *Thunb.*

Prodr. 186.—Lapeyrousia bracteata, *Ker in Bot. Mag. sub* t. 1246.—Peyrousia bracteata, *Sweet, loc. cit.*—Meristostigma bracteata, *Dietr. loc. cit.* *C. B. Spei.*

10. L. MICRANTHA, *Baker.*—Ovieda micrantha, *E. Meyer in herb. Drege*; *Klatt in Linnæa*, xxxii. 781.—Lapeyrousia manuleæflora, *Eckl. Top. Verz.* 31. *C. B. Spei.*

11. L. FABRICII, *Ker in Bot. Mag. sub* t. 1246.—Gladiolus Fabricii, *Thunb. Prodr.* 186.—Ovieda Fabricii, *Spreng. Syst.* i. 147.—Peyrousia Fabricii, *Sweet, Hort. Brit.* edit. 2, 499.—Meristostigma Fabricii, *Dietr. Synops.* i. 161.—Gladiolus anceps, *Linn. herb. ex parte.*—Diasia iridifolia, *Eckl. Top. Verz.* 31, *non DC.* *C. B. Spei.*

12. L. SILENOIDES, *Ker in Bot. Mag. sub* t. 1246.—Gladiolus silenoides, *Jacq. Ic.* t. 270.—Ovieda silenoides, *Spreng. Syst.* i. 147.—Meristostigma silenoides, *Dietr. Synops.* i. 161.—Peyrousia silenoides, *Sweet, Hort. Brit.* edit. 2, 499. *C. B. Spei.*

13. L. ANCEPS, *Ker in König & Sims, Ann.* i. 238; *Sweet, Brit. Flow. Gard.* t. 143.—Gladiolus anceps, *Linn. Suppl.* 94, *ex parte*; *Thunb. Diss. Glad.* No. 17, t. 2. fig. 3.—Ovieda anceps, *Spreng. Syst.* i. 147. Peyrousia anceps, *Sweet, Brit. Flow. Gard.* edit. 2, 499.—Meristostigma anceps, *Dietr. Synops.* i. 161.—Lapeyrousia compressa, *Pourret in Act. Tolos.* iii. t. 6.—Ixia Fabricii, *Delaroche Diss.* 18 (1766).—Ixia pyramidalis, *Lam. Ency.* iii. 334.—Witsenia pyramidalis, *Pers. Syn.* i. 42.—Gladiolus denticulatus, *Lam. Ill.* i. 118. *C. B. Spei.*

Var. L. ACULEATA, *Sweet, Hort. Brit.* 396.—Peyrousia aculeata, *Sweet, Brit. Flow. Gard.* ser. 2, t. 39.—Ovieda aculeata, *Klatt in Linnæa*, xxxii. 777.—Gladiolus anceps, *Linn. herb. ex parte.* *C. B. Spei.*

14. L. BAINESII, *Baker in Trimen's Journ.* 1876, 338. *Africa australis subtropicalis.*

Var. BREVIFLORA, *Baker.* *Transvaal.*

15. L. ODORATISSIMA, *Baker.*—Psilosiphon odoratissimus, *Welw. herb.* *Angola.*

16. L. FRAGRANS, *Baker.*—Psilosiphon fragrans, *Welw. herb.* *Angola.*

17. L. CYANESCENS, *Baker.*—Psilosiphon cyanescens, *Welw. herb.* *Angola.*

Species floribus mihi ignotis.

18. L. LITTORALIS, *Baker.* *Angola.*

55. WATSONIA, *Miller*.

Miller, (*Ic.* ii. 184, t. 276) *Dict.* edit. 6 (1771); *Ker, Gen. Irid.* 122; *Klatt in Linnæa*, xxxii. 735.—? Lomenia*, *Pourret in Act. Tolos.* iii. 13.—Neuberia, *Eckl. Verz. Top.* 37.—Micranthus (*Pers. Syn.* i. 46), *Eckl. Verz. Top.* 43.—Beilia, *Eckl. Verz. Top.* 43.—Gladioli *et* Antholyzæ sp. *auct. vet.*

Perianthium leviter irregulare, tubo supra ovarium producto curvato, deorsum filiformi, sursum cylindrico, limbi segmentis subæqualibus oblongis vel lanceolatis flore expanso patulis. *Stamina* 3 ad basin tubi partis dilatatæ unilateraliter inserta cum tubo arcuata, filamentis filiformibus ex tubo exsertis, antheris linearibus basi profunde sagittatis. *Ovarium* cylindricum triloculare, ovulis in loculo crebris; *stylus* filiformis cum tubo curvatus, stigmatibus tribus bifidis brevibus divaricatis. *Capsula* cylindrico-triquetra coriacea apice umbilicata tarde loculicide trivalvis, seminibus crebris oblongo-discoideis, testa atra membranacea. *Herbæ bulbosæ sæpissimæ capenses elatæ, bulbi tunicis reticulatis apice dense fibrosis, foliis ensiformibus vel linearibus, caulinis valde reductis, floribus copiosis sæpissime rubris spicato-paniculatis magnis vel raro parvis, spathæ unifloris valvis integris lanceolatis duris striatis brunneis interdum late membranaceo-marginatis.*

* WATSONIA, *Eckl.* *Elatæ, perianthii limbo quam tubus breviore.*

1. W. ALETROIDES, *Ker in Bot. Mag.* t. 533.—Antholyza aletroides, *Burm. Prodr. Cap.* 1.—Gladiolus aletroides, *Vahl, Enum.* ii. 96.—G. tubulosus, *Jacq. Ic.* t. 229.—Watsonia tubulosa, *Pers. Syn.* 42.—W. Jacquini, *Pers. Syn.* i. 42.—Antholyza Merianella, *Curt. in Bot. Mag.* t. 441, *non Linn.*—Gladiolus Merianus, *Thunb. Diss. Glad.* No. 12. *C. B. Spei.*

2. W. ANGUSTA, *Ker in König & Sims, Ann.* i. 230.—Gladiolus Merianus, var., *Jacq. Ic.* t. 231.—Antholyza fulgens, *Andr. Bot. Rep.* t. 192.—W. iridifolia, var. fulgens, *Ker in Bot. Mag.* t. 600.—W. fulgida, *Salisb. in Trans. Hort. Soc.* i. 323.—W. atrosanguinea, *Klatt in Linnæa*, xxxii. 738. *C. B. Spei* (*Java, inquilina*).

3. W. CYLINDRICA, *Baker in Trimen, Journ.* 1876, 336. *Madagascaria.*

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* *Lomenia borbonica*, Pourret, ex descrip. loc. cit., est planta borbonica ab speciebus nostris elatis *Watsoniæ* capensibus recedens stigmatibus 5 et perianthii tubo quam limbus duplo breviore.

4. W. MERIANA, *Miller, Gard. Dict.* edit. vi. No. 1 (*Icon.* ii. 184, t. 276); *Ker in König & Sims, Ann.* i. 230.—Antholyza Meriana, *Linn. Sp. Plant.* 54; *Bot. Mag.* t. 418.—Gladiolus Merianus, *Jacq. Ic.* t. 230; *Red. Lil.* t. 11, *non Thunb.* *C. B. Spei.*

Var. W. COCCINEA, *Herb. MSS.*—Watsonia Meriana, var., *Ker in Bot. Mag.* t. 1194; *Trew, Ehret.* 11, t. 40. *C. B. Spei.*

Var. W. ROSEO-ALBA, *Ker in Bot. Mag.* t. 537.—Gladiolus roseo-albus, *Jacq. Hort. Schoen.* t. 13. *C. B. Spei.*

Var. W. IRIDIFOLIA, *Ker in Bot. Mag.* sub t. 600, ex parte.—Gladiolus iridifolius, *Jacq. Ic.* t. 234 (*non* 235).

Var. W. DUBIA, *Eckl. Verz. Top.* 36. *C. B. Spei.*

5. W. STRICTIFLORA, *Ker in Bot. Mag.* t. 1406. *C. B. Spei.*

6. W. DENSIFLORA, *Baker in Trimen, Journ.* 1876, 336. *C. B. Spei in ditione orientali, Natalia.*

7. W. HUMILIS, *Miller, Gard. Dict.* edit. vi. No. 2 (*Icon.* ii. 198, t. 297 fig. 2); *Bot. Mag.* t. 631 et t. 1193.—Antholyza caryophyllacea, *Houtt. Handl.* xii. t. 79. fig. 3.—Gladiolus laccatus, *Jacq. Ic.* t. 232; *Red. Lil.* t. 343.—Watsonia laccata, *Ker in Bot. Mag.* sub t. 631.—Neuberia laccata, *Eckl. in Unio, Itin. Exsic.* No. 560.—Gladiolus marginatus, *Thunb.*, ex parte.—G. strictiflorus, *Red. Lil.* t. 399.—Watsonia tubulosa, *herb. Drège,* ex parte. *C. B. Spei.*

** NEUBERIA, *Eckl.* *Elatæ, limbi segmentis tubo æquilongis vel paulo brevioribus.*

8. W. ROSEA, *Ker in König & Sims, Ann.* i. 230; *Bot. Mag.* t. 1072.—Gladiolus pyramidatus, *Andr. Bot. Rep.* t. 335.—G. iridifolius, var., *Jacq. Ic.* t. 235.—Neuberia rosea, *Eckl. Verz. Top.* 37.—Gladiolus glumaceus, *Thunb. Prodr.* 186. *C. B. Spei.*

9. W. BREVIFOLIA, *Ker in Bot. Mag.* t. 601.—W. hyacinthoides, *Pers. Syn.* i. 43.—Antholyza spicata, *Andr. Bot. Rep.* t. 56.—Gladiolus testaceus, *Vahl, Enum.* ii. 105. *C. B. Spei.*

10. W. MARGINATA, *Ker in Bot. Mag.* t. 608.—Gladiolus marginatus, *Linn. Suppl.* 95; *Thunb. Diss. Glad.* No. 20, ex parte.—Ixia marginata, *Soland. in Ait. Hort. Kew.* i. 59.—Neuberia marginata, *Eckl. Top. Verz.* 37.—Ixia Sceptrum, *Hort.* *C. B. Spei.*

Var. MINOR, *Ker in Bot. Mag.* t. 1530. *C. B. Spei.*

*** BEILIA, *Eckl.* *Humiles, floribus magnitudine mediocribus.*

11. W. PUNCTATA, *Ker in König & Sims, Ann.* i. 229.—Gladiolus punctatus. *Roem. & Schult. Syst. Veg.* i. 425.—G. bracteolatus, *Lam.*

Ency. ii. 725.—Watsonia rubens, *Ker in Bot. Mag.* sub t. 1072.—Gladiolus rubens, *Vahl, Enum.* ii. 98.—Ixia punctata, *Andr. Bot. Rep.* t. 177.—Beilia triticea *et* spicata, *Eckl. Top. Verz.* 43, *excl. syn.* *C. B. Spei.*

Var. ZEYHERI, *Baker.* *C. B. Spei.*

Var. W. FILIFOLIA, *E. Meyer in herb. Drège.* *C. B. Spei.*

**** MICRANTHUS, *Pers.* *Humiles, floribus minutis densissimis, spathæ valvis margine late membranaceis albis.*

12. W. SPICATA, *Ker in König & Sims, Ann.* i. 229.—Gladiolus spicatus, *Linn. Sp. Plant.* i. 53, *teste Ker, non Linn. herb.*—G. tubulosus, *Burm. Prodr.* 2.—G. fistulosus, *Jacq. Hort. Schoen.* t. 6.—Ixia fistulosa, *Ker in Bot. Mag.* t. 523.—Micranthus fistulosus, *Eckl. Top. Verz.* 44.—Ixia spicata, *Soland.*; *Willd. Sp. Plant.* i. 200.—I. cepacea, *Red. Lil.* t. 96.—Gladiolus alopecuroides, *herb. Linn.* ex parte.—I. alopecuroidea, *Linn. Suppl.* 92.—Gladiolus alopecuroideus, *Pers. Syn.* i. 46. *C. B. Spei.*

13. W. PLANTAGINEA, *Ker in Bot. Mag.* t. 553.—Ixia plantaginea, *Ait. Hort. Kew.* i. 59; *Red. Lil.* t. 198.—Gladiolus plantagineus, *Pers. Syn.* i. 46.—Ixia triticea, *Burm. Prodr.* 1.—Gladiolus triticeus, *Thunb. Fl. Cap.* i. 194.—Phalangium spicatum, *Houtt. Handl.* xii. t. 80. fig. 2.—Gladiolus alopecuroides, *Linn. Sp. Plant.* 54, ex parte. Micranthus plantagineus *et* alopecuroideus, *Eckl. Verz. Top.* 43.—W. compacta, *Lodd. Bot. Cab.* t. 1577. *C. B. Spei.*

Var. JUNCEA, *Baker.* *C. B. Spei.*

56. ACIDANTHERA, *Hochst.*

Hochst. in Regensb. Flora, 1844, 25.—Sphærospora, *Klatt in Linnæa*, xxxii. 275, *non Sweet.*—Solenanthus, *Steud. MSS. teste Klatt.*—Gladioli *et* Ixiæ sp. *auct. vet.*

Perianthium leviter irregulare, tubo supra ovarium longe producto cylindrico leviter curvato medio haud dilatato, limbi segmentis subæqualibus oblongis vel oblanceolatis, inferioribus flore expanso magis patulis fauce sæpe maculatis. *Stamina* 3 ad faucem tubi unilateraliter inserta arcuata contigua, filamentis filiformibus, antheris angustis basifixis, interdum connectivo producto mucronatis. *Ovarium* oblongum triloculare, ovulis in loculo crebris; *stylus* filiformis ex tubo protrusus, stigmatibus tribus parvis integris oblanceolatis. *Capsula* parva oblonga membranacea loculicide trivalvis, seminibus minutis globosis, testa membranacea brunnea, albumine corneo. *Herbæ* *bulbosæ capenses et africanæ tropicales bulbi tunicis membranaceis vel fibroso-reticulatis, foliis paucis superpositis angustis, caulibus teretibus sæpissime simplicibus, floribus paucis laxe spicatis, spathæ unifloræ valvis magnis lanceolatis acutis viridibus integris, interioribus minoribus inclusis, floribus magnitudine mediocribus sæpissime suberectis tubo longe producto. A* Montbretiæ *speciebus paucis spathæ valvis magnis lanceolatis viridibus recedit perianthii tubo ad faucem cylindrico, segmentis magis æqualibus.*

* *Perianthii tubus ex spatha longe exsertus.*

1. A. UNICOLOR, *Hochst. in Schimp. Pl. Abyss.* No. 2304.—Tritonia Schimperi, *Aschers. & Klatt in Linnæa,* xxxiv. 697. *Abyssinia.*

2. A. BICOLOR, *Hochst. in Regensb. Flora,* 1844, 25; *Bouche & Wittm. in Berlin. Monat.* xix. 12, t. 1.—Ixia Quartiniana, *A. Rich. Fl. Abyss.* ii. 310.—Sphærospora gigantea, *Klatt in Linnæa,* xxxiv. 699. *Abyssinia.*

3. A. ÆQUINOCTIALIS, *Baker.*—Gladiolus æquinoctialis, *Herb. in Bot. Reg.* 1842, *Misc.* 97. *Sierra Leone.*

4. A. BRACHYSTACHYS, *Baker in Trimen, Journ.* 1876, 338. *C. B. Spei.*

5. A. GRAMINIFOLIA, *Baker in Trimen, Journ.* 1876, 338. *C. B. Spei.*

6. A. PLATYPETALA, *Baker in Trimen, Journ.* 1876, 339. *Natal.*

** *Perianthii tubus ex spatha breviter exsertus.*

7. A. HUTTONI, *Baker in Trimen, Journ.* 1876, 339. *C. B. Spei.*

8. A. FLEXUOSA, *Baker in Berlin Monat.* xix. 15.—Gladiolus flexuosus, *Thunb. Diss. Glad.* No. 8, t. 1. fig. 1.—Sphærospora flexuosa, *Klatt in Linnæa,* xxxii. 726. *C. B. Spei.*

9. A. TUBULOSA, *Baker.*—Ixia tubulosa, *Houtt. Handl.* xii. t. 78. fig. 2.—Gladiolus exscapus, *Thunb. Flor. Cap.* i. 175.—Sphærospora exscapa, *Klatt in Linnæa,* xxxii. 725.—Acidanthera exscapa, *Baker in Berlin. Monat.* xix. 15.—Gladiolus longiflorus, *Linn. herb.* ex parte.—Freesia costata, *Ecklon in herb. Zeyher. C. B. Spei.*

*** *Perianthii tubus in spatha inclusus.*

10. A. BREVICOLLIS *Baker in Trimen, Journ.* 1876. 339. *C. B. Spei.*

57. HOMOGLOSSUM, *Salisb.*

Salisb. in Trans. Hort. Soc. i. 325.—Gladioli *et* Antholyzæ sp. *auct.*

Perianthium leviter irregulare, tubo supra ovarium longe producto curvato deorsum filiformi sursum cylindrico, segmentis brevibus subæqualibus vel inferioribus minoribus flore expanso magis patulis. *Stamina* 3 ad basin tubi partis cylindricæ unilateraliter inserta, filamentis filiformibus secundis contiguis arcuatis, antheris linearibus basi profunde sagittatis. *Ovarium* oblongum triloculare, ovulis in loculo crebris; *stylus* filiformis, cum staminibus arcuatus, stigmatibus tribus brevibus integris apice cuneatis. *Capsulam* maturam non vidi. *Herbæ elatæ bulbosæ capenses, bulbi tunicis in segmenta linearia sectis, foliis angustissimis duris segregatis superpositis, floribus rubris magnitudine mediocribus dense vel laxe simpliciter spicatis, spathæ unifloris valvis lanceolatis integris brunneis vel viridibus.*

* *Laxiflora.*

1. H. REVOLUTUM, *Baker.*—Antholyza revoluta, *Burm. Prodr.* 1.—Watsonia revoluta, *Pers. Syn.* i. 42.—Gladiolus præcox, *Andr. Bot. Rep.* t. 38.—Homoglossum præcox, *Salisb. in Trans. Hort. Soc.* i. 325.—Watsonia præcox, *Pers. Syn.* i. 42.—Gladiolus Watsonius, *Thunb. Diss. Glad.* No. 10; *Jacq. Ic.* t. 233; *Bot. Mag.* t. 450; *Red. Lil.* t. 369.—G. recurvus, *Houtt. Handl.* xii. 59, t. 79. fig. 1. *C. B. Spei.*

Var. GAWLERI.—G. Watsonius, var., *Ker in Bot. Mag.* t. 569. *C. B. Spei.*

2. H. MERIANELLA, *Baker.*—Antholyza Merianella, *Linn. Syst. Veg.* xiv. 87, *non Bot. Mag.* t. 441.—Gladiolus Merianellus, *Thunb. Diss.* No. 11.—G. hirsutus, var. tenuiflorus, *Ker in Bot. Mag. sub* t. 574.—G. hirsutus, var. Merianellus, *Ker in Bot. Mag. sub* t. 727.—Watsonia humilis, *Pers. Syn.* i. 42, *non Miller.* *C. B. Spei.*

** *Densiflorum.*

3. H. LUCIDOR, *Baker.*—Antholyza lucidor, *Linn. Suppl.* 96.—Watsonia lucens, *Pers. Syn.* i. 42.—W. lucidior, *Eckl. Verz. Topog.* 36. *C. B. Spei.*

58. TRITONIA, *Ker.*

Ker in Bot. Mag. t. 581 (1802); *König & Sims, Ann.* i. 227, ex parte; *Gen. Irid.* 113, ex parte; *Klatt in Linnæa*, xxxii. 755, excl. sp.—Belemcanda, *Moench, Meth.* 529, ex parte.—Dichone, "*Laws.*," *Salisb. in Trans. Hort. Soc.* i. 320.—Crocosma, *Planch. in Flore des Serres*, t. 702.—Agretta, *Eckl. Verz. Top.* 23.—Waitzia, *Reich. Conspect.* 60, ex parte.

Perianthium subregulare late infundibulare, tubo supra ovarium brevi dimidio superiore obconico vel ad faucem cylindrico, segmentis subæqualibus obtusis obovato- vel oblongo-spathulatis diu ascendentibus imbricatis. *Stamina* ad faucem tubi inserta secunda vel subsecunda, filamentis filiformibus, antheris contiguis vel divaricatis linearibus vel oblongis. *Ovarium* oblongum triloculare, ovulis in loculo crebris; *stylus* filiformis, ex tubo protrusus, stigmatibus tribus integris oblanceolatis falcatis. *Capsula* parva oblonga trigibba membranacea loculicide trivalvis, seminibus minutis globosis, testa membranacea atra, albumine firmo. *Herbæ graciles bulbosæ capenses, bulbi tunicis fibroso-reticulatis, foliis multis basalibus linearibus flabellatis, caulibus teretibus simplicibus, vel furcatis, floribus laxe spicatis, spathæ unifloris valvis oblongis brunneis scariosis, exteriore latiore tricuspidata, interiore emarginata, perianthii limbo parvo vel magnitudine mediocri rubello, croceo vel albido, segmentis alternis vel omnibus sæpe fauce maculatis. Genus ad* Ixieas *arcte accedens;* Eutritonia *a* Morphixia *et* Dichone *ab* Ixia *præsertim recedunt antheris plus minusve secundis.*

Sect. I. Eutritonia. *Grandifloræ, perianthii tubo apice obconico.*

1. T. crocata, *Ker in König & Sims, Ann.* i. 227.—Ixia crocata, *Linn. Sp. Plant.* i. 52; *Linn. Herb.* !; *Linn. fil. Pl. Rar. Hort. Ups.* t. 7; *Bot. Mag.* t. 184.—Gladiolus crocatus, *Wendl. Obs. Bot.* t. 4.—Ixia iridifolia, *Delaroche, Diss.* 24; *Miller, Ic.* t. 239. fig. 2. *C. B. Spei.*

Var. T. purpurea, *Ker in Bot. Mag. sub* t. 1275.—Ixia purpurea, *Lam. Ency.* iii. 341. *C. B. Spei.*

Var. T. sanguinea, *Eckl. Verz. Top.* 29. *C. B. Spei.*

Var. T. coccinea, *Eckl. Verz. Top.* 29. *C. B. Spei.*

Var. T. aurantiaca, *Eckl. Verz. Top.* 29. *C. B. Spei.*

2. T. miniata, *Ker in Bot. Mag.* t. 609.—Ixia miniata, *Jacq. Hort. Schoen.* t. 24.—I. crocata, *Red. Lil.* t. 335. *C. B. Spei.*

3. T. deusta, *Ker in Bot. Mag.* t. 622.—Ixia deusta, *Soland. in Hort. Kew.* i. 60.—I. miniata, *Red. Lil.* t. 89.—I. gibba, *Salisb. Prodr.* 38.

—I. crocata, var. nigro-maculata, *Andr. Bot. Rep.* t. 134. *C. B. Spei.*

4. T. HYALINA, *Baker.*—Ixia hyalina, *Linn. Suppl.* 91.—I. fenestrata, *Jacq. Ic.* t. 289.—Tritonia fenestrata, *Ker in Bot. Mag.* t. 704. *C. B. Spei.*

5. T. SQUALIDA, *Ker in Bot. Mag.* t. 581.—Ixia squalida, *Soland. in Ait. Hort. Kew.* i 61, ex parte.—I. hyalina, *Red. Lil.* t. 87, *non Linn.* —I. similis, *Salisb. Prodr.* 38.—I. fenestrata, var., *Jacq. Frag.* t. 34. fig. 2.—I. lancea, *Thunb. Diss. Ixia*, No. 21, *non Jacq.* *C. B. Spei.*

6. T. BOLUSII, *Baker in Trimen, Journ.* 1876, 337. *C. B. Spei.*

Sect. II. DICHONE. *Parvifloræ, perianthii tubo ad faucem cylindrico, genitalibus brevibus.*

7. T. UNDULATA, *Baker.*—Ixia undulata, *Burm. Fl. Cap.* 1 (1768).—I. crispa, *Linn. Suppl.* 91 (1781); *Thunb. Diss. Ixia*, No. 8, t. 2. fig. 3; *Ker in Bot. Mag.* t. 599; *Red. Lil.* t. 433.—Dichone crispa, *Laws. Cat.* 6, *teste Salisbury.*—Agretta crispa, *Eckl. Verz. Top.* 24. *C. B. Spei.*

8. T. SCILLARIS, *Baker.*—Ixia scillaris, *Linn. Sp. Plant.* i. 52; *Houtt. Handl.* xi. t. 77. fig. 2; *Red. Lil.* t. 127.—I. pentandra, *Linn. Suppl.* 92.—Agretta pentandra, *Eckl. Verz. Top.* 29.—Hesperantha pentandra, *herb. Drège.*—Ixia reflexa, *Andr. Bot. Rep.* t. 14 (I. rotata, *Andr. Recens.*).—I. retusa, *Salisb. Prodr.* 25.—I. polystachya, var. incarnata, *Andr. Bot. Rep.* t. 128.—I. polystachya, *Jacq. Ic.* t. 275; *Ker in Bot. Mag.* t. 629, *non Linn.* *C. B. Spei.*

Sect. III. CROCOSMA. *Grandiflora, perianthii tubo ad faucem cylindrico, genitalibus ex tubo longe exsertis.*

9. T. AUREA, *Pappe, MSS.*; *Hook. in Bot. Mag.* t. 4335.—Crocosma aurea, *Planch. in Flore des Serres*, t. 702. *Natalia, Kaffraria.*

59. FREESIA, *Klatt.*

Klatt in Linnæa, xxxiv. 672 (*non Ecklon, Verz. Top.* 30).—Gladioli sp., *Jacq. &c.*—Tritoniæ sp., *Gawl. &c.*

Perianthium irregulare, tubo supra ovarium longe producto, dimidio inferiore cylindrico, dimidio superiore late infundibulari, segmentis brevibus oblongis inæqualibus diu ascendentibus. *Stamina* 3 ad medium tubi unilateraliter inserta secunda contigua, filamentis filiformibus, antheris linearibus inclusis basi sagittatis. *Ovarium* triloculare, ovulis in loculo crebris;

stylus filiformis staminibus æquilongus, apice ramis 6 stigmatosis brevibus subulatis præditus. *Capsula* parva oblonga vel globosa trigibba membranacea loculicide trivalvis, seminibus minutis globosis. *Herbæ bulbosæ capenses, bulbi tunicis laxe fibroso-reticulatis, foliis congestis graminoideis flabellatis, caulibus gracilibus teretibus profunde furcatis, floribus in spicas secundas dispositis, spathæ unifloris valvis brevibus oblongis apice sphacelatis truncatis* 2-3-*dentatis, floribus flavis suaveolentibus. Habitus omnino* Montbretiæ, *sed recedit stigmatibus furcatis.*

1. F. REFRACTA, *Klatt in Linnæa*, xxxiv. 673.—Gladiolus refractus, *Jacq. Ic.* t. 241; *Red. Lil.* 419.—Tritonia refracta, *Ker in König & Sims, Ann.* i. 227; *Bot. Reg.* 135.—Gladiolus resupinatus, *Pers. Syn.* i. 45.—G. Sparrmanni, *Thunb. Fl. Cap.* edit. 2, 49.—Tritonia odorata, *Lodd. Bot. Cab.* t. 1820.—Freesia odorata, *Klatt in Linnæa*, xxxiv. 672.—Gladiolus xanthospilus, *DC. in Red. Lil.* t. 124.—Freesia xanthospila, *Klatt, loc. cit.*—Sparaxis Joubertii, *Eckl. MSS. C. B. Spei.*

2. F. LEICHTLINII, *Klatt in Regel, Gartenfl.* t. 808. *C. B. Spei.*

60. BABIANA, *Ker.*

Ker in Bot. Mag. t. 539; *Gen. Irid.* 140; *Klatt in Linnæa*, xxxii. 765.—Acaste, *Salisb. in Trans. Hort. Soc.* i. 322.—Gladioli, Ixiæ, *et* Antholyzæ sp. *auct. vet.*

Perianthium irregulare vel subregulare, tubo supra ovarium producto subrecto elongato vel brevi gracili apice infundibulari, limbi segmentis oblongo- vel oblanceolato-spathulatis subæqualibus vel supremo maximo cochleato, reliquis minoribus. *Stamina* prope faucem tubi inserta secunda arcuata, filamentis filiformibus brevibus vel elongatis, antheris linearibus basifixis. *Ovarium* triloculare, ovulis in loculo crebris; *stylus* filiformis cum staminibus arcuatus ex tubo protrusus, stigmatibus tribus integris apice cuneatis. *Capsula* globosa trigibba coriacea loculicide trivalvis, seminibus parvis turgidis, testa crassa carnosa brunnea, albumine corneo. *Herbæ bulbosæ capenses pilosæ, bulbi tunicis multis brunneis membranaceis vel fibrosis secus collum productis, foliis basalibus pluribus linearibus vel cuneatis oblique petiolatis plicatis nervis validis percursis, caulinis paucis reductis, floribus rubris purpureis luteis vel albidis spicatis, spathæ unifloris valvis dense pilosis lanceolatis, interiore sæpe bifida.*

Subgenus EUBABIANA. *Perianthii limbus irregularis.*

* *Tubus ex spatha protrusus.*

1. B. SAMBUCINA, *Ker in König & Sims, Ann.* i. 234; *Bot. Mag.* t. 1019.—Gladiolus sambucinus, *Jacq. Hort. Schoen.* t. 15. *C. B. Spei.*

2. B. SPATHACEA, *Ker in König & Sims, Ann.* i. 234; *Bot. Mag.* t. 638.—Gladiolus spathaceus, *Linn. Suppl.* 96. *C. B. Spei.*

3. B. HYPOGÆA, *Burchell, Travels,* ii. 589. *C. B. Spei.*

4. B. BAINESII, *Baker in Trimen, Journ.* 1876, 335. *C. B. Spei in ditione Transvaal.*

5. B. DREGEI, *Baker in Trimen, Journ.* 1876, 336. *C. B. Spei.*

6. B. DISTICHA, *Ker in König & Sims, Ann.* i. 234; *Bot. Mag.* t. 626. —Gladiolus plicatus, *Jacq. Ic.* t. 237, *vix Linn. C. B. Spei.*

7. B. TUBATA, *Sweet, Brit. Flow. Gard.* edit. ii. 500.—Gladiolus tubatus, *Jacq. Ic.* t. 264.—G. longiflorus, *Andr. Bot. Rep.* t. 5.—Babiana tubiflora, var. tubata, *Ker, Bot. Mag.* t. 680.—B. stricta, var. tubiflora, *Ker, Gen. Irid.* 151. *C. B. Spei.*

8. B. TUBIFLORA, *Ker in König & Sims, Ann.* i. 233; *Bot. Mag.* t. 847 et 1019.—Gladiolus tubiflorus, *Linn. Suppl.* 96; *Thunb. Diss. Glad.* No. 23, t. 2. fig. 2; *Jacq. Ic.* t. 266.—G. angustifolius, *Lam. Ill.* i. 119.—G. inclinatus, *Red. Lil.* t. 44.—? Babiana tubulosa, *Ker, Gen. Irid.* 154 (Ixia tubulosa, *Burm. Prodr.* 1). *C. B. Spei.*

9. B. THUNBERGII, *Ker in König & Sims, Ann.* i. 233.—Antholyza plicata, *Linn. Suppl.* 96. *C. B. Spei.*

** *Tubus ex spatha vix protrusus.*

10. B. SPRENGELII, *Baker.*—B. pygmæa, *Spreng. in Pl. Zeyher. C. B. Spei.*

11. B. PYGMÆA, *Baker.*—Ixia pygmæa, *Burm. Prodr. Cap.* 1 (*Plukenet, Phyt.* 424, fig. 8.)—Babiana nana, *Spreng. Syst. Veg.* i. 156.—Gladiolus nanus, *Andr. Bot. Rep.* t. 137. *C. B. Spei.*

12. B. FLABELLIFOLIA, *Harv. MSS.*; *Klatt in Linnæa,* xxxv. 380. *Namaqualand.*

13. B. CUNEIFOLIA, *Baker in Trimen, Journ.* 1876, 335. *C. B. Spei.*

14. B. MUCRONATA, *Ker in König & Sims, Ann.* i. 233.—Gladiolus mucronatus, *Jacq. Ic.* t. 253. *C. B. Spei.*

15. B. PLICATA, *Ker in Bot. Mag.* t. 576.—Gladiolus plicatus, *Thunb. Diss.* No. 24, ex parte.—G. fragrans, *Jacq. Hort. Schoen.* t. 14.—B.

reflexa, *Ker, Gen. Irid.* 154.—Gladiolus reflexus, *Licht. in Roem. & Schultes, Syst. Veg.* i. 439.—B. cærulescens, *Eckl. Verz. Top.* 32. *C. B. Spei.*

16. B. FIMBRIATA, *Baker.*—Antholyza fimbriata, *Klatt in Linnæa,* xxxv. 299. *C. B. Spei.*

17. B. RINGENS, *Ker in König & Sims, Ann.* i. 233; *Lodd. Bot. Cab.* t. 1006.—Antholyza ringens, *Linn. Sp. Plant.* i. 54 (*Commelin. Hort. Amstel.* i. t. 41). *C. B. Spei.*

Subgenus ACASTE (*Salisb.*). *Perianthii limbus subregularis.*

18. B. STRICTA, *Ker in Bot. Mag.* t. 621 et 637.—Gladiolus strictus, *Soland. in Ait. Hort. Kew.* i. 63.—G. plicatus, *Linn. Sp. Plant.* i. 53, ex parte.—Ixia plicata, *Linn. Amœn. Acad.* iv. 300, ex parte.—Gladiolus nervosus, *Lam. Encyc.* ii. 722.—G. mucronatus, *Red. Lil.* t. 142. *C. B. Spei.*

Var. B. VILLOSA, *Ker in Bot. Mag.* t. 583.—Ixia villosa, *Soland. in Ait. Hort. Kew.* i. 58.—I. punicea, *Jacq. Ic.* t. 287.—I. flabelliformis, *Salisb. Prod.* 37.—Gladiolus villosus, *Vahl, Enum.* ii. 145.—G. puniceus, *Vahl, Enum.* ii. 144. *C. B. Spei.*

Var. B. RUBRO-CYANEA, *Ker in König & Sims, Ann.* i. 233.—Ixia rubro-cyanea, *Jacq. Ic.* t. 285; *Curt. Bot. Mag.* t. 410.—I. cyanea, *Pers. Syn.* i. 48.—Gladiolus rubrocyaneus, *Vahl, Enum.* ii. 98.—B. rubro-cærulea, *Reich. Exot.* t. 30. *C. B. Spei.*

Var. B. OBTUSIFOLIA, *Ker in König & Sims, Ann.* i. 233.—Ixia villosa, *Jacq. Ic.* t. 284, *non Soland.*—Gladiolus villosulus, *Roem. & Schult. Syst. Veg.* i. 444. *C. B. Spei.*

Var. B. PURPUREA, *Ker in Bot. Mag. sub* t. 1019.—Ixia purpurea, *Jacq. Ic.* t. 286 et 286 *a.*—B. stricta, var. purpurea, *Ker in Bot. Mag.* t. 1052. *C. B. Spei.*

Var. B. SULPHUREA, *Ker in Bot. Mag. sub* t. 1019; *König & Sims, Ann.* i. 239; *Bot. Mag.* t. 1053.—Gladiolus sulphureus, *Jacq. Ic.* t. 239.—G. plicatus, *Andr. Bot. Rep.* t. 268. *C. B. Spei.*

Var. B. ANGUSTIFOLIA, *Sweet, Brit. Flow. Gard.* edit. ii. 499.—B. stricta, var., *Ker in Bot. Mag.* t. 637.—Ixia villosa, var., *Jacq. Mag.* 22, t. 14. fig. 3. *C. B. Spei.*

Species dubia, spathæ valvis brevibus laceratis.

19. B. SECUNDA, *Ker, Gen. Irid.* 154.—Gladiolus secundus, *Thunb. Prodr.* ii. 186; *Act. Soc. Hafn.* ii. t. 4. *C. B. Spei.*

61. MELASPHÆRULA, *Ker.*

Ker in Bot. Mag. t. 615 (Jan. 1803); *Gen. Irid.* 157.—Diasia, *DC. in Bull. Soc. Phil.* 1803, 251 (1804); *Klatt in Linnæa,* xxxii. 746.—Phalangium, *Burm. Prodr. Cap.* 3, *non Tourn.*—Gladiolus, § Aglæa, *Pers. Syn.* i. 46.—Aglæa, *Ecklon, Verz. Top.* 44.

Perianthium irregulare, tubo supra ovarium brevissimo campanulato, limbo bilabiato, segmentis tribus superioribus oblongis acuminatis, tribus inferioribus longioribus angustioribus. *Stamina* 3 ad basin tubi unilateraliter inserta secunda arcuata limbo triplo breviora, filamentis filiformibus parallelis, antheris parvis oblongis. *Ovarium* depresso-globosum trilobatum, ovulis in loculo paucis; *stylus* filiformis cum staminibus arcuatus, stigmatibus tribus integris falcatis apice cuneatis. *Capsula* parva duplo latior quam longa profunde acute triquetra membranacea loculicide trivalvis, seminibus in loculo paucis minutis globosis, testa nitida punctata atro-castanea, albumine duro. *Herba bulbosa capensis, bulbi parvi globosi tunicis membranaceis brunneis, foliis linearibus membranaceis, spicis copiose paniculatis rachibus capillaribus flexuosis, floribus parvis luteo-viridibus segmentis purpureo carinatis, spathæ unifloris valvis oblongis integris acutis margine membranaceis.*

1. M. GRAMINEA, *Ker in Bot. Mag.* t. 615.—Gladiolus gramineus, *Linn. Suppl.* 95, *excl. syn.*; *Jacq. Ic.* t. 236; *Andr. Bot. Rep.* t. 62.—G. ramosus, *Linn. Sp. Plant.* i. 53.—Phalangium ramosum, *Burm. Prodr. Cap.* 3, *excl. syn.*—Aglæa graminea, *Eckl. Verz. Top.* 44.—Diasia iridifolia, *DC. in Red. Lil.* t. 54.—D. graminifolia, *DC. in Red. Lil.* t. 163.—Melasphærula parviflora, *Lodd. Bot. Cab.* t. 1444.—M. intermedia *et* iridifolia, *Sweet, Hort. Brit.* edit. ii. 502.—Asphodelus foliis planis caule ramoso floribus sparsis, *Miller, Ic.* 38, t. 56. *C. B. Spei.*

62. MONTBRETIA, *DC.*

DC. in Bull. Philom. 1803, 251; *Klatt in Linnæa,* xxxii. 752 (*extens.*).—Houttuynia, *Houtt. Handl.* xii. 448, t. 85, *non Thunb.*—Tritonia, *Ker in König & Sims, Ann.* i. 227, ex parte.—Freesia, *Ecklon, Verz. Top.* 30, *non Klatt.*—Waitzia, *Reich. Conspect.* 60, ex parte.

Perianthium irregulare, tubo supra ovarium longe vel breviter producto deorsum cylindrico sursum oblique late infundibulari, segmentis brevibus oblongis inæqualibus, superiore majore, tribus inferioribus minoribus basi maculatis vel interdum callo producto instructis. *Stamina* ad basin tubi partis infundibularis unilateraliter inserta secunda arcuata contigua, filamentis filiformibus, antheris linearibus basifixis. *Ovarium* triloculare, ovulis in loculo crebris; *stylus* filiformis cum staminibus arcuatus, ramis stigmatosis tribus oblanceolatis integris falcatis. *Capsula* parva oblonga trigibba membranacea loculicide trivalvis, seminibus minutis globosis, testa brunnea membranacea, albumine corneo. *Herbæ bulbosæ capenses* (*species unica africana tropicalis*) *bulbi tunicis membranaceis vel fibroso-reticulatis, foliis congestis linearibus graminoideis flabellatis, floribus spicatis, spathæ valvis sæpe parvis oblongis apice sphacelatis dentatis, interdum majoribus integris lanceolatis, perianthii limbo pallido vel rubello.*

* HOUTTUYNIA. *Spathæ valvæ lanceolatæ acutæ integræ.*

1. M. CAPENSIS, *Baker*.—Houttuynia capensis, *Houtt. Handl.* xii. 448, tab. 85. fig. 3.—Tritonia capensis, *Ker in König & Sims, Ann.* i. 228; *Bot. Mag.* tab. 618, 1531.—Gladiolus roseus, *Jacq. Ic.* t. 261.—Tritonia rosea, *Dry. in Hort. Kew.* edit. ii. 191.—Gladiolus ixioides, *Thunb. Fl. Cap.* i. 208. *C. B. Spei.*

2. M. PAUCIFLORA, *Baker in Trimen, Journ.* 1876, 336. *C. B. Spei.*

** EUMONTBRETIA. *Spathæ valvæ oblongæ apice sphacellatæ dentatæ.*

† *Longicolles.*

3. M. LACERATA, *Baker*.—Gladiolus laceratus, *Burm. Prodr. Cap.* 2. —Gladiolus crispus, *Linn. Suppl.* 94; *Thunb. Diss. Glad.* No. 7, tab. 1. fig. 2; *Jac. Ic.* t. 267; *Andr. Bot. Rep.* t. 142.—Tritonia crispa, *Ker in König & Sims, Ann.* i. 228; *Bot. Mag.* t. 678.—Freesia crispa, *Eckl. Verz. Top.* 30. *C. B. Spei.*

Var. PECTINATA, *Baker*.—Gladiolus pectinatus, *Soland. in Herb. Banks.* —Ixia pectinata, *Vahl, Enum.* ii. 62.—Tritonia pectinata, *Ker in Bot. Mag.* sub t. 1275. *C. B. Spei.*

4. M. STRIATA, *Baker*.—Gladiolus striatus, *Soland. in Herb. Banks. C. B. Spei.*

5. M. PALLIDA, *Baker*.—Tritonia pallida, *Ker in Bot. Mag.* sub t. 1275. —Gladiolus longiflorus, *Jacq. Ic.* t. 262, *non Linn.* *C. B. Spei.*

6. M. VIRIDIS, *Baker*.—Gladiolus viridis, *Soland. in Ait. Hort. Kew.* iii. 481.—Tritonia viridis, *Ker in Bot. Mag.* t. 1275. *C. B. Spei.*

†† *Brevicolles.*

7. M. SECURIGERA, *DC. in Red. Lil.* t. 53.—Gladiolus securiger, *Ait. Hort. Kew.* i. 65; *Bot. Mag.* t. 383.—Ixia gladiolaris, *Lam. Encyc.* iii. 341.—Tritonia securigera, *Ker in König & Sims, Ann.* i. 228. *C. B. Spei.*

8. M. FLAVA, *Klatt in Linnæa,* xxxii. 753.—Gladiolus flavus, *Ait. Hort. Kew.* i. 65.—Tritonia flava, *Ker in König & Sims, Ann.* i. 228; *Bot. Reg.* t. 747.—Gladiolus securiger, var. flavus, *Pers. Syn.* i. 45.—Ixia flabellularis, *Vahl, Enum.* ii. 67. *C. B. Spei.*

9. M. LINEATA, *Baker*.—Gladiolus lineatus, *Salisb. Prod.* 40; *Bot. Mag.* t. 487; *Red. Lil.* t. 55 et 400.—Tritonia lineata, *Ker in König & Sims, Ann.* i. 228.—Gladiolus venosus, *Willd. Enum.* i. 58.—Ixia squalida, *Thunb. Fl. Cap.* i. 224, ex parte.—I. reticulata, *Thunb. Fl. Cap.* edit. ii. 60.—I. Thunbergii, *Roem. & Schult. Syst. Veg.* i. 391. *C. B. Spei.*

10. M. ROSEA, *Baker*.—Tritonia rosea, *Klatt in Linnæa,* xxxii. 760. *C. B. Spei.*

11. M. DUBIA, *Baker*.—Tritonia dubia, *Ecklon, MSS.*; *Klatt in Linnæa,* xxxii. 761. *C. B. Spei.*

12. M. STRICTIFOLIA, *Klatt in Linnæa,* xxxii. 753. *C. B. Spei.*

13. M. LAXIFOLIA, *Klatt in Linnæa,* xxxii. 754; *Baker in Trans. Linn. Soc.* xxix. 155, t. 101 A. *C. B. Spei, Africa æquatorialis orientalis.*

14. M. KAMISBERGENSIS, *Baker*.—Tritonia kamisbergensis, *Klatt in Linnæa,* xxxii. 760. *C. B. Spei.*

63. SYNNOTTIA, *Sweet.*

Sweet, Brit. Flow. Gard. t. 150; *Klatt in Linnæa,* xxxii. 749.—Sparaxidis sp., *Ker*.—Gladioli sp., *Thunb. & Jacq.*

Perianthium irregulare, tubo supra ovarium longe producto, dimidio inferiore gracili cylindrico, medio geniculato, dimidio superiore oblique late infundibulari, segmentis oblongis inæqualibus, superiore majore, tribus inferioribus minoribus flore expanso falcatis. *Stamina* ad medium tubi inserta secunda contigua arcuata, filamentis filiformibus, antheris linearibus basi sagittatis. *Ovarium* oblongum triloculare, ovulis in loculo crebris; *stylus* filiformis staminibus æquilongus, stigmatibus tribus oblanceolatis integris falcatis. *Capsula* parva oblonga trigibba membranacea loculicide trivalvis, seminibus minutis globosis. *Herbæ bulbosæ capenses, bulbi tunicis foveolatis, foliis congestis loratis membranaceis flabellatis, floribus paucis laxe spicatis, spathæ valvis oblongo-navicularibus membranaceis pallidis striis brunneis decoratis, apice laceratis, floribus versicoloribus.*

1. S. BICOLOR, *Sweet, Hort. Brit.* edit. ii. 501.—Gladiolus bicolor, *Thunb. Diss. Glad.* No. 16, t. 2. fig. 1; *Jacq. Ic.* t. 240.—Sparaxis bicolor, *Ker in König & Sims, Ann.* i. 225.—Ixia bicolor, *Ker in Bot. Mag.* t. 548. *C. B. Spei.*

2. S. GALEATA, *Sweet, Hort. Brit.* edit. ii. 501.—Gladiolus galeatus, *Jacq. Ic.* t. 258.—Sparaxis galeata, *Ker in König & Sims, Ann.* i. 225. *C. B. Spei.*

3. S. VARIEGATA, *Sweet, Brit. Flow. Gard.* t. 150.—Sparaxis luteo-violacea, *Eckl. Verz. Top.* 27.—S. Wattii, *Harv. MSS.* *C. B. Spei.*

64. GLADIOLUS, *Tourn.*

Tourn. Instit. 365, t. 190; *Linn. Gen.* No. 57; *Ker, Gen. Irid.* 129; *Klatt in Linnæa*, xxxii. 689.—Hebea (*Pers. Ench.* i. 44), *Ecklon, Topog. Verz.* 41.—Sphærospora, *Sweet, Brit. Flow. Gard.* edit. ii. 501, *non Klatt.*—Schweiggera, *Meyer in herb. Drège, non Mart.*—Symphyodolon, Ballosporum, Ophiolyza, Hyptissa, *et* Ranisia, *Salisb. Gen.* 142–3.

Perianthium irregulare, tubo supra ovarium producto curvato infundibulari, e basi ad faucem sensim ampliato, segmentis inæqualibus tubo æquilongis vel longioribus oblongo- vel obovato-spathulatis vel unguiculatis, supremo maximo recto dorso convexo, inferioribus minoribus flore expanso falcatis fauce sæpissime maculatis. *Stamina* 3, prope faucem tubi unilateraliter inserta, filamentis filiformibus arcuatis, antheris linearibus basifixis parallelis rectis. *Ovarium* triloculare, ovulis in loculo crebris; *stylus* filiformis cum staminibus arcuatus, stigmatibus tribus integris oblanceolatis. *Capsula* obovoidea chartacea loculicide trivalvis, seminibus sæpissime discoideis late alatis, testa tenui, interdum globosis exalatis, testa crassiore mucosa castanea, albumine corneo. *Herbæ elatæ bulbosæ capenses, africanæ tropicales, mediterraneæ et orientales, bulbi tunicis* *membranaceis brunneis, caule elato simplici vel ramoso, foliis paucis superpositis firmis ensiformibus vel linearibus sæpissime glabris, floribus magnis spicatis sæpissime rubro-purpureis, spathæ unifloris valvis integris sæpissime magnis lanceolatis viridibus.*

Subgenus I. EUGLADIOLUS. *Perianthii segmenta oblongo- vel obovato-spathulata.*

* *Species mediterraneæ et orientales.*

† *Semina discoidea alata.*

1. G. BYZANTINUS (*Bauhin, Pinax,* 41); *Miller, Gard. Dict.* edit. vi. No. 3; *Ker in Bot. Mag.* t. 874; *Reich. Ic. Crit.* t. 643. *Regio mediterranea.*

2. G. COMMUNIS, *Linn. Sp. Plant.* i. 52, ex parte; *Bot. Mag.* t. 86 et 1575; *Red. Lil.* t. 267; *Reich. Ic. Crit.* tab. 598; *Fl. Germ.* tab. 349. fig. 777. *Regio mediterranea.*

Var. G. NOTARISII, *Parl. Fl. Ital.* iii. 259. *Liguria.*

3. G. IMBRICATUS, *Linn. Sp. Plant.* i. 52; *M. B. Cent. Ross.* t. 60; *Reich. Ic. Crit.* tab. 599; *Fl. Germ.* tab. 350. fig. 778.—G. rossicus, *Pers. Syn.* i. 46.—G. tenuis, *M. Bieb. Fl. Taur. Cauc.* i. 29.—G. galiciensis, *Besser, Fl. Galic.* i. 51.—G. neglectus, *Schult. Obs.* 14. *Europa centralis orientalis, Caucasus, Persia borealis.*

Var. G. CRISPIFLORUS, *Herbert in Bot. Reg.* 28, *Misc.* 65. *Rossia meridionalis.*

Var. G. HYGROPHILUS, *Boiss. & Huet, in Huet, Pl. Armen. Exsic. Armenia.*

Var.? LIBANOTICUS, *Boiss. Diagn.* ser. ii. 4, 92. *Syria.*

4. G. ILLYRICUS, *Koch, Syn.* edit. ii. 806; *Sturm, Fl. Germ.* xix. t. 83; *Reich. Ic. Fl. Germ.* t. 352. fig. 780; *Syme in Seem. Journ. Bot.* i. t. 4; *Eng. Bot.* edit. iii. t. 1493. *Anglia, Europa meridionalis.*

Var. G. REUTERI, *Boiss. Pugill.* 113.—G. serotinus, *Welw. Exsic. Hispania, Lusitania.*

5. G. PALUSTRIS, *Gaud. Helv.* i. 97, vi. 336; *Sturm, Fl. Germ.* tab. ix. t. 351; *Reich. Ic. Fl. Germ.* tab. 351. fig. 779.—G. Boucheanus, *Schlecht. in Linnæa,* vii. 488.—G. palustris, *Dietrich, Fl. Boruss.* t. 13. *Europa centralis.*

†† *Semina globosa exalata* (Sphærospora, *Sweet*).

6. G. SEGETUM, *Ker in Bot. Mag.* t. 719; *Sturm. Fl. Germ.* xix. t. 719; *Reich. Ic. Crit.* t. 600; *Ic. Fl. Germ.* tab. 353. fig. 781.—G.

communis, *Linn.*, ex parte; *Sibth. & Smith, Fl. Græc.* t. 37.—G. italicus, *Gaud. Fl. Helv.* i. 96.—G. dubius, *Guss. Prodr. Suppl.* 8.—G. infestus, *Bianca in Att. Catan.* xix. 94.—G. tenuiflorus, *K. Koch in Linnæa*, xxi. 636.—Sphærospora imbricata, *Sweet, Brit. Flow. Gard.* edit. ii. 501, ex parte. *Regio mediterranea.*

Var. G. COMMUTATUS, *Bouché. Regio mediterranea.*

Var. G. LUDOVICÆ, *Jan, Elench.* i. *Italia, Gallia meridionalis.*

Var. G. INARIMENSIS, *Gussone, Enum. Pl. Inarinim.* 326, t. 14. *Italia.*

Var. G. GUEPINI, *Koch in Flora*, 1840, 466. *Gallia.*

Var. G. CAUCASICUS, *Herbert in Bot. Reg.* xxviii. *Misc.* 65. *Caucasus.*

7. G. KOTSCHYANUS, *Boiss. Diag.* xiii. 15. *Persia.*

8. G. ALEPPICUS, *Boiss. Diag.* xiii. 13. *Asia minor, Syria.*

** *Species minus cognitæ seminibus mihi ignotis.*

9. G. SPATHACEUS, *Parl. Fl. Ital.* iii. 262. *Sicilia.*

10. G. TRIPHYLLUS, *Sibth. in Flora Græca*, t. 38.—Sphærospora triphylla, *Sweet, Brit. Flow. Gard.* edit. ii. 501. *Cyprus.*

11. G. PERSICUS, *Boiss. Diagn.* vii. 102. *Persia.*

12. G. HALOPHILUS, *Boiss. Diag.* xii. 14. *Asia minor.*

13. G. ATROVIOLACEUS, *Boiss. Diag.* xiii. 14. *Persia.*

14. G. PETRÆUS, *Boiss. & Huet in Huet Fl. Armen. Exsic. Armenia.*

*** *Species capenses et paucæ africanæ tropicales.*

† *Angustifolii, perianthii segmentis oblongo-spathulatis acutis.*

15. G. TRISTIS, *Linn. Sp. Plant.* i. 53, ex parte; *Bot. Mag.* t. 272; *Jacq. Ic.* t. 243; *Red. Lil.* t. 35; *Ref. Bot.* t. 23; *Miller, Ic.* t. 235. fig. 1.—G. spiralis, *Pers. Syn.* i. 43. *C. B. Spei.*

Var. G. CONCOLOR, *Salisb. Parad.* t. 18; *Bot. Mag.* t. 1098. *C. B. Spei.*

16. G. GRANDIS, *Thunb. Fl. Cap.* i. 186.—G. tristis, var. grandis, *Thunb. Diss. Glad.* No. 8.—G. tristis, *Linn. herb.*, ex parte!—G. versicolor, *Andr. Bot. Rep.* t. 19; *Ker in Bot. Mag.* t. 1042.—G. versicolor, var. major, *Ker in Bot. Mag.* sub t. 556. *C. B. Spei.*

Var. G. LÆVIS, *Thunb. Prodr.* ii. 184.—G. versicolor, var. binervis, *Ker in Bot. Mag.* sub t. 1042. *C. B. Spei.*

Var. G. ELONGATUS, *Thunb. Prodr.* ii. 185.—G. pterophyllus, *Pers. Syn.* i. 43.—G. versicolor, var. longifolius, *Ker in Bot. Mag.* sub t. 556.—G. tristis, var., *Jacq. Ic.* t. 244. *C. B. Spei.*

Var. SUAVEOLENS, *Ker, Gen. Irid.* 136.—G. versicolor, var. tenuior, *Ker in Bot. Mag.* sub t. 566. *C. B. Spei.*

17. G. RECURVUS, *Linn. Mant.* 28; *Ker in Bot. Mag.* t. 578.—G. carinatus, *Soland. in Ait. Hort. Kew.* i. 64.—G. punctatus, *Jacq. Ic.* t. 247.—G. ringens, *Andr. Bot. Rep.* t. 27 et 227; *Red. Lil.* t. 123.—G. maculatus, *Sweet*; *Klatt in Linnæa*, xxxii. 708.—G. odorus, *Salisb. Prodr.* 40.—G. violaceus, *Pers. Syn.* i. 43.—Watsonia recurva, *Pers. Syn.* i. 43.—G. tristis, var. punctatus, *Thunb. Diss.* No. 8.—G. Breynianus, *Ker, Gen. Irid.* 135; *Miller, Ic.* 157, t. 235. fig. 2. *C. B. Spei.*

18. G. LONGICOLLIS, *Baker in Trimen's Journ.* 1876, 182. *Kaffraria.*

19. G. GRACILIS, *Jacq. Ic.* 246; *Red. Lil.* t. 425; *Ker in Bot. Mag.* t. 562.—G. setifolius, *Eckl. Topog. Verz.* 37.—G. spilanthus, *Spreng. in herb. Zeyher. C. B. Spei.*

20. G. LAMBDA, *Klatt in Linnæa*, xxxii. 708. *C. B. Spei.*

21. G. TRICHONEMIFOLIUS, *Ker in Bot. Mag.* t. 1483.—Ixia spathacea, *Soland. in herb. Banks. C. B. Spei.*

22. G. THUNBERGII, *Eckl. Top. Verz.* 37. *C. B. Spei.*

23. G. PUBESCENS, *Baker in Trimen's Journ.* 1876, 333. *Kaffraria britannica.*

24. G. ANGUSTUS, *Linn. Sp. Plant.* 55; *Linn., herb.*, ex parte!; *Hort. Cliff.* 20, t. 6; *Jacq. Ic.* t. 252; *Andr. Rep.* t. 589; *Red. Lil.* t. 344. —G. undulatus, *Jacq. Ic.* t. 251? *non* t. 257.—G. trimaculatus, *Lam. Ill.* i. 116. t. 32. fig. 3.—G. cordatus, *Thunb. Prodr.* ii. 185. *C. B. Spei, Africa tropicalis orientalis.*

25. G. CUSPIDATUS, *Jacq. Ic.* t. 257; *Ker in Bot. Mag.* t. 582.—G. angustus, *Linn. herb.* ex parte.—G. cuspidatus, var., *Andr. Bot. Rep.* t. 219.—G. cuspidatus, var. longiflorus, *Red. Lil.* t. 136.—G. undulatus, *Linn. Mant.* 27, ex parte.—G. affinis, *Pers. Syn.* i. 45. *C. B. Spei.*

Var. G. VENTRICOSUS, *Lam. Ency.* ii. 727.—G. cuspidatus, *Andr. Bot. Rep.* t. 147; *Red. Lil.* t. 36.—G. carneus, *Jacq. Ic.* t. 255; *Ker in Bot. Mag.* t. 591, *non Delaroche.*—G. cuspidatus, var. breviflorus, *Klatt in Linnæa*, xxxii. 721. *C. B. Spei.*

26. G. HASTATUS, *Thunb. Prodr.* ii. 185; *Ker in Bot. Mag.* t. 1564.— —G. vomerculus, *Ker, Gen. Irid.* 142.—G. tigrinus, *Ecklon, MSS. C. B. Spei.*

†† *Angustifolii, perianthii segmentis obovato-spathulatis obtusis vel cuspidatis.*

Parviflori.

27. G. BREVIFOLIUS, *Jacq. Frag.* iii. 12, tab. 2. fig. 1; *Ic.* t. 249.—

G. carneus, *Andr. Bot. Rep.* t. 240, *non Delaroche.*—G. hirsutus, var. brevifolius, *Ker in Bot. Mag.* t. 727.—G. hirsutus, var. aphyllus, *Ker in Bot. Mag.* t. 992.—G. aphyllus, *Ker, Gen. Irid.* 134.—G. tristis, *Thunb. Diss.* No. 8, *ex parte. C. B. Spei.*

Var. G. OROBANCHE, *Red. Lil.* t. 125. *C. B. Spei.*

28. G. VILLOSUS, *Ker, Gen. Irid.* 133.—G. hirsutus, var., *Ker in Bot. Mag.* t. 823.—G hirsutus, var. villosiusculus, *Ker in Bot. Mag. sub* t. 727.—G. villosiusculus, *Soland. in herb. Banks.*—G. laccatus, *Thunb. Fl. Cap.* edit. ii. 45, excl. syn. *Jacq.*—G. pilosus, *Eckl. Top. Verz.* 38. *C. B. Spei.*

29. G. COCHLEATUS, *Sweet, Brit. Flow. Gard.* ser. ii. t. 140. *C. B. Spei.*

30. G. DEBILIS, *Ker in Bot. Mag.* t. 2585.—Geissorhiza albens, *E. Meyer in herb. Drège. C. B. Spei.*

31. G. STRIATUS, *Jacq. Ic.* t. 260.—Tritonia striata, *Ker in König & Sims, Ann.* i. 228. *C. B. Spei.*

32. G. TENELLUS, *Jacq. Ic.* t. 248; *Schneevoght, Ic.* t. 40.—G. tristis, varr. humilis *et* luteus, *Thunb. Diss.* No. 8. *C. B. Spei.*

33. G. TENUIS, *Baker in Trimen's Journ.* 1876, 335. *C. B. Spei.*

34. G. INFLATUS, *Thunb. Prodr.* ii. 185.—G. ringens, *Eckl. Top. Verz.* 37, *non Redouté. C. B. Spei.*

35. G. INVOLUTUS, *Delaroche, Diss.* 28, t. 3.—G. bimaculatus, *Lam. Ency.* ii. 727; *Miller. Icones,* 158, tab. 236. fig. 1. *C. B. Spei.*

36. G. ATROPURPUREUS, *Baker in Trimen, Journ.* 1876, 335. *Terra fluminis Zambesi.*

37. G. CŒRULESCENS, *Baker. Angola.*

38. G. LURIDUS, *Welw. herb. Angola.*

39. G. BREVICAULIS, *Baker. Angola.*

40. G. LAXIFLORUS, *Baker. Angola.*

41. G. GREGARIUS, *Welw. herb. Angola.*

42. G. BENGUELLENSIS, *Baker. Angola.*

43. G. HYALINUS, *Jacq. Ic.* t. 242.—G. strictus, *Jacq. Coll.* iv. 170. *C. B. Spei.*

44. G. VITTATUS, *Hornem. Hort. Hafn.* ii. 950.—G. fasciatus, *Roem. & Schultes, Syst. Veg.* i. 429.—G. undulatus, *Schneev. Icon.* t. 19.—G. undulatus, var., *Ker in Bot. Mag.* t. 538. *C. B. Spei.*

Grandiflori.

45. G. SALTATORUM, *Baker in Trans. Linn. Soc.* xxix. 155. *Africa tropicalis orientalis.*

46. G. CORNEUS, *Oliver in Trans. Linn. Soc,* xxix. 155, tab. 100. fig. 1. *Africa tropicalis orientalis.*

47. G. NEWII, *Baker in Trimen's Journ.* 1876, 334. *Regio temperata montis Kilimanjaro.*

48. G. IGNESCENS, *Bojer, MSS.*; *Baker in Trimen's Journ.* 1876, 334. *Madagascaria.*

49. G. MELLERI, *Baker in Trimen's Journ.* 1876, 334. *In ditione fluminis Zambesi.*

50. G. WELWITSCHII, *Baker. Angola.*

††† *Latifolii.*

Parviflori.

51. G. PURPUREO-AURATUS, *Hook. fil. in Bot. Mag.* t. 5944. *Natalia.*

52. G. OCHROLEUCUS, *Baker in Trimen's Journ.* 1876, 182. *Kaffraria transkeiana.*

53. G. CRASSIFOLIUS, *Baker in Trimen's Journ.* 1876, 334. *Natal, Orange Free State, Faku territory, Transvaal.*

54. G. ECKLONI, *Lehm.*; *Klatt in Linnæa,* xxxii. 712.—Neuberia longifolia, *Eckl. Topog. Verz.* 37.—Gladiolus carneus, *Klatt in Linnæa,* xxxii. 722, *non Delaroche. C. B. Spei, Natal, Kaffraria, Orange Free State.*

55. G. SERICEO-VILLOSUS, *Hook. Bot. Mag.* t. 5427.—Antholyza hirsuta, *Klatt in Linnæa,* xxxv. 379. *C. B. Spei.*

Var. G. LUDWIGII, *Pappe. C. B. Spei, Natal, Orange Free State.*

56. G. SPICATUS, *Klatt in Linnæa,* xxxv. 377, *non Linn. Guinea.*

57. G. PAPILIO, *Hook. Bot. Mag.* t. 5565. *C. B. Spei, Natal, Orange Free State.*

58. G. MULTIFLORUS, *Baker. Angola.*

Blandi.

59. G. BLANDUS, *Soland. in Ait. Hort. Kew.* i. 64; *Ker in Bot. Mag.* t. 625.—G. angustus, *Linn. herb., ex parte. C. B. Spei.*

Var. G. CAMPANULATUS, *Andr. Bot. Rep.* t. 188.—G. blandus, var., *Ker in Bot. Mag.* t. 645.—G. blandus, var. purpureo-albescens, *Klatt in Linnæa,* xxxii. 718.—G. blandus, var. campanulatus, *Ker, Gen. Irid.* 140. *C. B. Spei.*

Var. G. CARNEUS, *Delaroche, Diss.* 30, t. 4. *C. B. Spei.*

Var. EXCELSUS, *Ker in Bot. Mag.* t. 1665.—G. excelsus, *Sweet, Brit. Flow. Gard.* edit. 2, 501. *C. B. Spei.*

Var. G. ALBIDUS, *Jacq. Ic.* t. 256.—G. blandus, var. albidus, *Ker, Gen. Irid.* 140.—G. blandus, var. niveus, *Ker in Bot. Mag.* t. 648.—G. blandus, *Andr. Bot. Rep.* t. 99.—G. carneus, var., *Red. Lil.* t. 377. *C. B. Spei.*

Var. ? G. GUEINZII, *Kunze in Linnæa,* xx. 14. *C. B. Spei.*

60. G. OPPOSITIFLORUS, *Herbert in Bot. Reg.* 1842, *Misc.* 98. *Madagascaria.*

61. G. MORTONIANUS, *Herbert in Bot. Mag.* t. 3860. *C. B. Spei.*

62. G. FLORIBUNDUS, *Jacq. Ic.* t. 254; *Ker in Bot. Mag.* t. 610.—G. grandiflorus, *Andr. Bot. Rep.* t. 118. *C. B. Spei.*

63. G. MILLERI, *Ker in Bot. Mag.* t. 632.—Antholyza spicata, *Miller, Gard. Dict.* edit. 6, No. 2 (*Icones*, 27, t. 40). *C. B. Spei.*

64. G. UNDULATUS, *Jacq. Ic. t.* 254; *Red. Lil.* t. 122; *Ker in Bot. Mag.* t. 647.—G. striatus, *Andr. Bot. Rep.* t. 111.—G. angustus, *Linn. herb., ex parte!* *C. B. Spei.*

65. G. HIRSUTUS, *Jacq. Ic.* t. 250; *Red. Lil.* t. 278.—G. roseus, *Andr. Bot. Rep.* t. 11.—G. hirsutus, var. roseus, *Ker in Bot. Mag.* t. 574.—G. ambiguus, *Roem. & Schult. Syst. Veg.* i. 446.—G. mucronatus, *Lam. Ill.* i. 119. *C. B. Spei.*

Cardinales.

66. G. CARDINALIS, *Curt. Bot. Mag.* t. 135; *Schneev. Ic.* t. 27; *Red. Lil.* t. 122; *Kerner, Hort.* t. 19.—G. speciosus, *Eckl. Topog. Verz.* 41, *non Thunb.* *C. B. Spei.*

67. G. CRUENTUS, *Moore in Gard. Chron.* 1868, 1139; *Hook. fil. in Bot. Mag.* t. 5810. *Natal.*

68. G. SPLENDENS, *Baker in Trimen's Journ.* 1876, 333. *C. B. Spei.*

Dracocephali.

69. G. PSITTACINUS, *Hook. in Bot. Mag.* t. 3032; *Bot. Reg.* t. 1442; *Reich. Exot.* t. 116.—G. natalensis, *Reinw.*; *Lodd. Bot. Cab.* t. 1756; *Sweet, Brit. Flow. Gard.* ser. ii. t. 281.—Watsonia natalensis, *Eckl. Topog. Verz.* 34. *Natal, C. B. Spei, Transvaal, Africa tropicalis austro-orientalis.*

70. G. COOPERI, *Baker in Bot. Mag.* t. 6002. *Natal, C. B. Spei.*

71. G. SAUNDERSII, *Hook. fil. in Bot. Mag.* t. 5873. *C. B. Spei.*

72. G. ANGOLENSIS, *Welw. herb.* *Angola.*

73. G. DECORATUS, *Baker in Trimen's Journ.* 1876, 333. *Terra fluminis Zambesi.*

74. G. DRACOCEPHALUS, *Hook. fil. in Bot. Mag.* t. 5884. *Natal.*

75. G. AURANTIACUS, *Klatt in Linn.* xxxv. 378. *Natal.*

76. G. QUARTINIANUS, *A. Rich. Fl. Abyss.* ii. 307.—G. Schimperianus, *Steud. MSS.* *Abyssinia, terra fluminis Zambesi, Angola, Madagascaria?*

77. G. ANDONGENSIS, *Welw. herb.* *Angola.*

Formæ notabiliores hortenses hybridæ *Eugladioli* sunt (cf. Herbert in Journ. Hort. Soc. ii. 89):—

G. GANDAVENSIS, *Van Houtte, Cat.* 1844; *Flore des Serres*, March 1846, t. 1; *Paxt. Mag.* xi. 27. Inter *psittacinum* et *cardinalem*, fide Van Houtte; inter *psittacinum* et *oppositiflorum*, fide Herbert.

G. BRENCHLEYENSIS, *Hort.*, ad *gandavensem* accedens.

G. COLVILLEI, *Sweet, Brit. Flow. Gard.* t. 155; *Paxt. Mag. Bot.* ii. 197. Inter *G. tristem* et *cardinalem*.

G. RAMOSUS, *Paxt. Mag.* vi. 99. Inter *cardinalem* et *oppositiflorum*.

G. PUDIBUNDUS, *Sweet, Brit. Flow. Gard.* ser. ii. t. 176; *Paxt. Mag. Bot.* ii. 197. Inter *blandum* et *cardinalem*.

G. SPOFFORTHIANUS, *Herb.* Inter *blandum* et *cardinalem*.

G. MITCHAMIENSIS, *Herb.* Inter *tristem* et *blandum*.

G. RIGIDUS, *Herb.* Inter *tristem* et *blandum*.

G. PROPINQUUS, *Herb.* Inter *floribundum* et *blandum*.

G. FRAGRANS, *Herb.* Inter *recurvum* et *tristem*.

G. HAYLOCKIANUS, *Herb.* Inter *versicolorem* et *blandum*.

G. HERBERTIANUS, *G. Don.* Inter *tristem* et *Spofforthianum*.

G. ODORATUS, *Herb.* Inter *hirsutum* et *Spofforthianum*.

G. DELICATUS, *Herb.* Inter *recurvum* et *blandum*.

G. CANDIDUS, *Herb.* Inter *cardinalem* et *blandum*.

G. INCARNATUS, *Hort.* Inter *cardinalem* et *blandum*.

G. WILLMOREANUS, *Flore des Serres*, t. 639. Inter *floribundum* et *gandavensem*.

Subgenus II. HEBEA. *Segmenta perianthii rotundato-rhomboidea vel obovata, omnia distincte unguiculata. Spathæ valvæ virides herbaceæ.*

78. G. ALATUS, *Linn. Sp. Plant.* 53; *Andr. Bot. Rep.* t. 8; *Bot. Mag.* t. 586.—Hebea alata, *Eckl. Topog. Verz.* 42.—Gladiolus speciosus, *Thunb. Prodr.* i. 196.—G. papilionaceus, *Licht. in Roem. & Schultes, Syst. Veg.* i. 408.—Hebea galeata, *Eckl. Topog. Verz.* 41. *C. B. Spei.*
Var. G. NAMAQUENSIS, *Ker in Bot. Mag.* t. 592.—G. galeatus, *Andr. Bot. Rep.* t. 122.—G. equitans, *Thunb. Fl. Cap.* 192; *Act. Soc. Hafn.* vi. t. 2. *C. B. Spei.*

79. G. ORCHIDIFLORUS, *Andr. Bot. Rep.* t. 241.—G. alatus, *Jacq. Ic.* t. 259, *non Linn.*—G. alatus, *Thunb. Diss.* No. 15, *ex parte*.—G. viperatus, *Ker in Bot. Mag.* t. 688; *Sweet, Brit. Flow. Gard.* t. 156.—G. virescens, *Thunb. Fl. Cap.* i. 196. *C. B. Spei.*

80. G. PERMEABILIS, *Delaroche, Diss.* 27, t. 2.—G. dichotomus, *Thunb. Diss.* No. 6.—G. edulis, *Burchell*; *Ker in Bot. Reg.* t. 169.—G. Dregei, *Klatt in Linnæa*, xxxii. 693.—Hebea Zeyheri, *Ecklon, Topog. Verz.* 42. *C. B. Spei.*

81. G. PULCHELLUS, *Klatt in Linnæa*, xxxii. 693.—Hebea pulchella, *Ecklon, MSS. C. B. Spei.*

82. G. FORMOSUS, *Klatt in Linnæa*, xxxii. 692.—Hebea formosa, *Eckl. Topog. Verz.* 42. *C. B. Spei.*

83. G. BICOLOR, *Baker.*—Hebea bicolor, *Eckl. Topog. Verz.* 42.—Gladiolus luteus, *Klatt in Linnæa*, xxxii. 694, *ex parte. C. B. Spei.*

84. G. LUTEUS, *Lam. Encyc.* ii. 725. *Madagascaria.*

85. G. UNGUICULATUS, *Baker.*—G. cochleatus, *Baker in Trimen, Journ.* 1876, 333, *non Sweet. Sierra Leone.*

Subgenus III. SCHWEIGGERA, *E. Meyer. Parviflori, segmentis omnibus obovatis vel oblongis longe unguiculatis. Spathæ valvæ parvæ brunneæ rigidulæ.*

86. G. MONTANUS, *Linn. Suppl.* 95; *Thunb. Diss. Glad.* No. 1, tab. 1. fig. 4.—Antholyza montana, *Ker in König & Sims, Ann.* i. 233; *Lodd. Bot. Cab.* t. 1022.—G. parviflorus, *Jacq. Obs.* iv. 2, t. 78.—G. tabularis, *Eckl. Topog. Verz.* 43.—Schweiggera nemorosa, *E. Meyer in herb. Drège. C. B. Spei.*

Var. RAMOSUS.—Hebea ramosa, *Eckl. Top. Verz.* 43.—Antholyza ramosa, *Klatt in Linnæa*, xxxii. 734. *C. B. Spei.*

87. G. ARENARIUS, *Baker.*—Hebea orchidiflora, *Eckl. Top. Verz.* 43, *sed non* Gladiolus orchidiflorus, *Andr.*—Antholyza orchidiflora, *Klatt in Linnæa*, xxxv. 733.—Schweiggera montana, *E. Meyer in herb. Drège. C. B. Spei.*

65. ANTHOLYZA, *Linn.*

Linn. Gen. No. 58 (*excl. sp.*); *Ker, Gen. Irid.* 154; *Klatt in Linnæa*, xxxii. 729.—Cunonia, *Miller, Dict.* edit. vi.—Petamenes, *Salisb. in Trans. Hort. Soc.* i. 324.—Anisanthus, *Sweet, Brit. Flow. Gard.* ser. ii. t. 84.

Perianthium valde irregulare, tubo supra ovarium longe producto curvato deorsum filiformi sursum cylindrico, segmentis valde inæqualibus oblanceolato- vel oblongo-spathulatis, supremo recto dorso convexo, inferioribus minoribus, flore expanso falcatis. *Stamina* 3, ad basin tubi partis cylindricæ unilateraliter inserta, filamentis filiformibus parallelis cum tubo arcuatis, antheris linearibus basi sagittatis. *Ovarium* oblongum triloculare, ovulis in loculo pluribus crebris; *stylus* filiformis, cum staminibus arcuatus, stigmatibus tribus integris oblanceolatis. *Capsula* magna oblonga trigibba chartacea loculicide trivalvis, seminibus variis, interdum turgidis exalatis, interdum triquetris anguste alatis, interdum discoideis late alatis; testa castanea, albumine corneo. *Herbæ elatæ bulbosæ capenses et africanæ tropicales bulbi tunicis membranaceis, foliis linearibus vel ensiformibus, caulinis paucis reductis, floribus multis speciosis spicatis, spathæ valvis lanceolatis vel oblongis viridibus vel brunneis integris vel interiore apice emarginata.*

* EUANTHOLYZA. *Semina turgida, nullo modo alata.*

1. A. ÆTHIOPICA, *Linn. Sp. Plant.* 54; *Bot. Mag.* t. 561; *Andr. Bot. Rep.* t. 210; *Red. Lil.* t. 110.—A. floribunda, *Salisb. in Trans. Hort. Soc.* i. 324.—A. præalta, *Red. Lil.* t. 387. *C. B. Spei.*

Var. A. RINGENS, *Andr. Bot. Rep.* t. 32.—A. vittigera, *Salisb. in Trans. Hort. Soc.* i. 324.—A. æthiopica, var., *Bot. Mag.* t. 1172. *C. B. Spei.*

Var. A. BICOLOR, *Gasp. in Belg. Hort.* ii. 145, *cum icone.*—A. æthiopica, var. minor, *Bot. Reg.* t. 1159. *C. B. Spei.*

** *Semina triquetra anguste alata.*

2. A. ABYSSINICA, *A. Brong. in A. Rich. Fl. Abyss.* ii. 306. *Abyssinia.*

3. A. CAFFRA, *Ker in König & Sims, Ann.* i. 232.—Anisanthus splendens, *Sweet, Brit. Flow. Gard.* ser. ii. t. 84.—Antholyza rupestris *et* brevifolia, *Ecklon, MSS., teste Klatt. C. B. Spei.*

*** *Semina discoidea, late alata.*

4. A. NERVOSA, *Thunb. Diss.* No. 3. *C. B. Spei.*

5. A. CUNONIA, *Linn. Sp. Plant.* i. 54; *Miller. Ic.* 75, t. 113; *Red. Lil.* t. 12.—Cunonia Antholyza, *Miller, Dict.* edit. vi.—Gladiolus Cunonia, *Gaertn. Sem.* i. 31, t. 11. fig. 4.—Anisanthus Cunonia, *Sweet, Hort. Brit.* edit. ii. 500.—Antholyza coccinea, *Spreng. Neue Ent.* i. 253. *C. B. Spei.*

6. A. HUILLENSIS, *Welw. herb. Angola.*

**** *Semina mihi ignota.*

7. A. QUADRANGULARIS, *Burm. Prodr. Fl. Cap.*—Gladiolus quadrangularis, *Ker in Bot. Mag.* t. 567.—Petamenes quadrangularis, *Salisb. in Trans. Hort. Soc.* i. 324.—Anisanthus quadrangularis, *Klatt in Linnæa,* xxxii. 727.—Gladiolus abbreviatus, *Andr. Bot. Rep.* t. 166.—Antholyza abbreviata, *Pers. Syn.* i. 42. *C. B. Spei.*

8. A. saccata, *Baker.*—Anisanthus saccatus, *Klatt in Linnæa*, xxxv. 300. *C. B. Spei.*
9. A. paniculata, *Klatt in Linnæa*, xxxv. 379. *Natalia.*
10. A. intermedia, *Baker. C. B. Spei.*
11. A. fucata, *Baker.*—Tritonia fucata, *Herb. in Bot. Reg.* xxiv. t. 35. *C. B. Spei.*

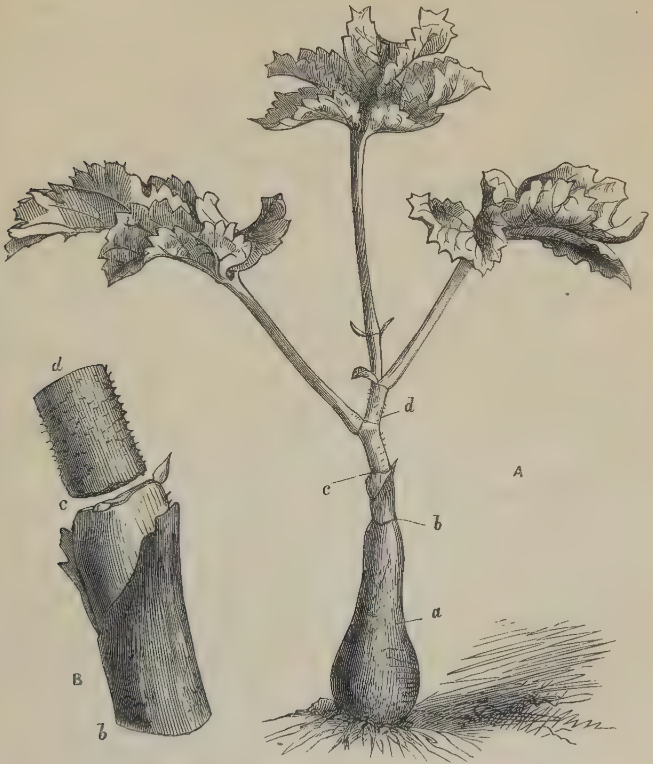
Note on the Disarticulation of Branches. By R. Irwin Lynch, Esq. Communicated by J. G. Baker, Esq., F.L.S.

[Read April 19, 1877.]

(Plate III.)

The object of the present communication is to bring before the Fellows of the Society a short notice of some striking examples of the disarticulation of branches, which recently have come under my observation. The literature of the subject includes:—a contribution by H. von Mohl to the 'Botanische Zeitung,' 1860; "On the shedding of branches and leaves in Coniferæ," by Dr. James Stark, in Trans. Roy. Soc. Edinb. vol. xxvii.; mention by Prof. Sachs, in his Text-book of Botany (Engl. trans. p. 446), of the case of *Taxodium distichum*, where the axes bearing the leaves are deciduous; and the Report of the Scientific Committee of the Roy. Hort. Soc. ('Gard. Chron.' 1877, p. 506), before whom Sir Joseph Hooker exhibited branches of *Dammara robusta*, illustrating their deciduous nature. It has thus been observed of many trees that branches are cast off in an irregular manner; and this often, I think, arises from the ripening process having ceased at the point where detachment takes place. *Vitis macropus* is a notable instance: only the lower part of the year's growth is ripened, and by far the larger portion falls away with the leaves (see subjoined woodcut). *V. cirrhosa* offers a similar illustration. A specimen at Kew has now two climbing stems ten feet long, the whole of which will apparently be cast off this autumn, with the exception of about three inches,—all above the second and third leaves respectively.

In *Castilloa*, however, the lateral branches are detached at the point of insertion, regularly from below upwards, apparently from the same cause that determines the fall of a leaf, leaving behind a similar scar (consult figs. 1–6, Plate III.). Nature, in this case, leaves a provision for replacement of the fallen branch: beside the scar there always exists a dormant bud, which bud is on either its right or its left side. In the Royal Gardens, Kew, are plants from two sources; in one case the buds are on the right, and in the other on the left side*. *Antiaris toxicaria* has the same habit of detaching its branches at the point of insertion. The scars do not always remain round, as in the illustrations, but



Vitis macropus, Welwitsch. Sketches from a living specimen growing in Kew Gardens. A, the entire plant, considerably reduced: *a*, the swollen base of the stem; *b*, line marking where last year's branch was thrown off; *c*, another line indicating the position of next disarticulation, the interval between *b* and *c* being the permanent portion of current year's growth; *d*, portion (all above *c*) which falls off with the leaves. B, another drawing, of natural size, of the parts of fig. A between the letters *b* and *d*. At *c* in this figure an interspace is given to show the mode of disarticulation of the year's growth from that part of the stem which remains.

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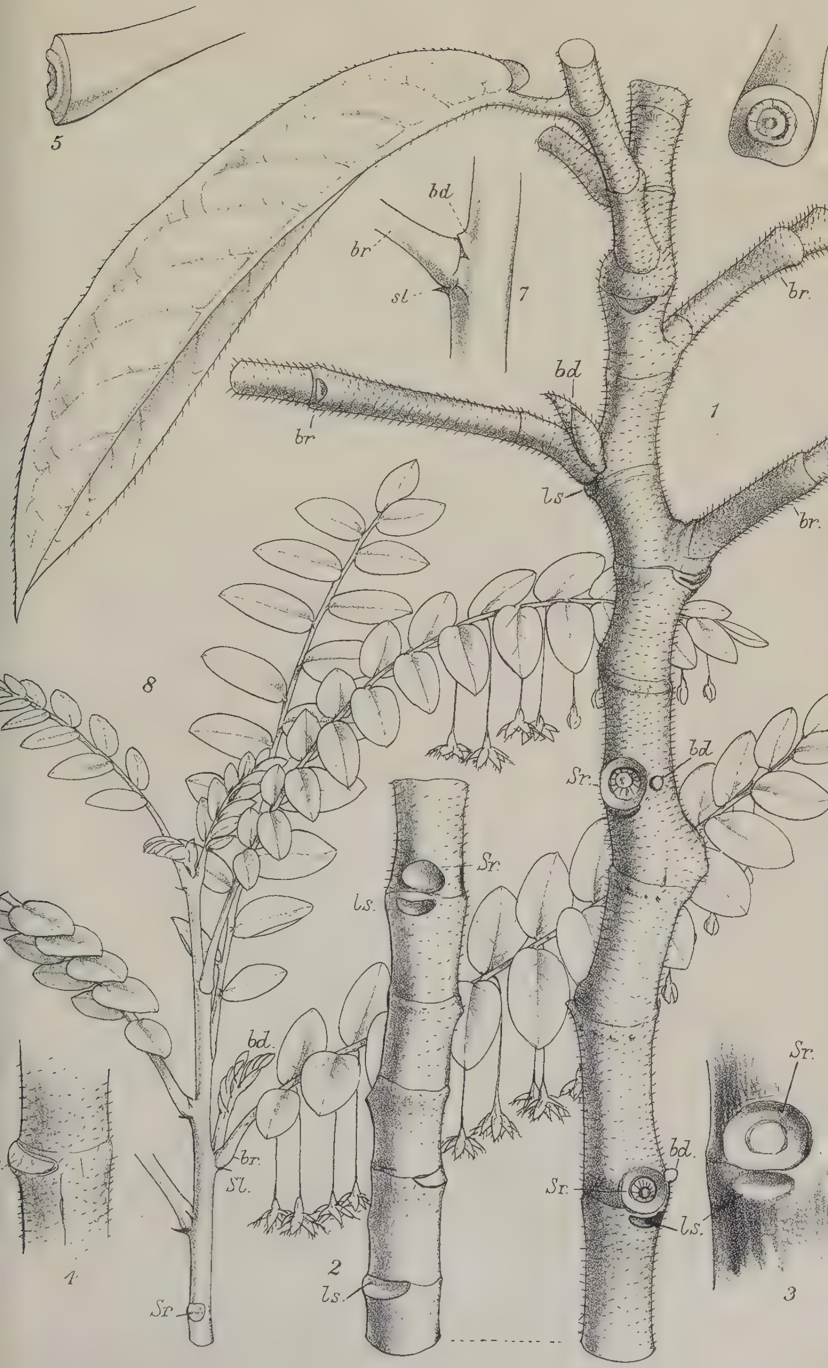
* The plants have further developed since writing the above, and show that exceptions may occur, the buds changing side in part or throughout the entire growth.

are gradually compressed to almost a horizontal line, and at last become obliterated.

In reply to some questions with reference to *Castilloa elastica*, I have received the following information from Mr. R. Cross, the well-known collector of Caoutchouc, *Cinchona*, and other plants. He states that in the forest the young Castilloas push up stems to a great height, and during the progress of growth throw out at variable distances a number of simple leafy shoots. These, on becoming mature, begin to wither in succession from the oldest or lowest, and finally separate by an articulation. At last, however, branches are produced which bear fruit and do not drop off. Sometimes the trunk, after running up to a certain height, divides into two or three stems, each furnished with numerous short stiff upright branches, which are permanent and ripen fruit abundantly. Probably, however, the "abortive" shoots are produced during the entire growth of the tree. Mr. Cross does not consider these to be "true" branches. He says that the wood is not properly formed, the buds are imperfectly developed, and from these the plant cannot easily be propagated. All this perhaps arises from the nourishment being required for the ascending growth—a conclusion borne out by the plants at Kew, which show that a given bud may grow into an erect permanent branch, or into a horizonal deciduous branch, according to the requirements of circumstances. The latter, if taken in time, appear, under cultivation, to strike as freely as the permanent branches. The character of a branch is evidently brought about by the direction of its growth.

In the preceding cases the disarticulatory branches have not a leaf-like appearance; in *Vitis macropus* (woodcut) they bear flowers and fruit, but never, as before said, in *Castilloa*, or perhaps in the case of *Antiaris*. In the following cases, however, the deciduous branches are very leaf-like (in some instances have been described for leaves) and bear flowers and fruit. The examples laid before the Society are *Phyllanthus* (*Reidia*) *glaucescens* and *P. juglandifolius*); further instances may be found in other species of the genus and in the allied genera of *Cicca*, *Sauropus*, &c., all belonging to Euphorbiaceæ. The leaf-like branches of these plants have much in common with true leaves; they fall off in the same way, and have buds in their axils which alone continue the permanent branching of the plant; the stem also is swollen at the base, as are many petioles. It must be remarked that branches are always axillary in production, and in these cases are subtended by



J.N.Fitch lith.

DISARTICULATION OF BRANCHES

Fitch im

minute squamiform leaves. These leaves therefore subtend two buds, one of which grows into a leaf-like deciduous branch, and the other remains dormant unless required to produce a permanent branch. The deciduous branches have in some species the form of a pinnate leaf, as in the above mentioned, or may in some cases be supra-decompound, as, for instance, *Phyllanthus Conami*.

The foregoing has, I think, some interest, as bearing on the morphology of leaf and stem. In Dr. Masters's 'Vegetable Teratology,' p. 479, it is said that the two organs may be spoken of as morphologically identical. It is important to observe that the fall of a flower or inflorescence is equal, morphologically, to the fall of a branch, all the parts of the flower representing leaves.

DESCRIPTION OF PLATE III.

Fig. 1. Part of the stem, with portion of the branches and a leaf of *Castilloa elastica*, of natural size. Drawn from a specimen growing in the Royal Gardens, Kew. The following lettering (except where otherwise given) applies to this and the succeeding figures:—*br*, branch; *bd*, dormant buds; *sr*, scars remaining after the disarticulation of the lateral branches; *l s*, scars of the fallen leaf.

Fig. 2 is the lower portion of stem or continuation of fig. 1; and shows the scar of earliest fallen and lowest branch with the scar of its subtending leaf.

Fig. 3. A segment of the stem of another and larger specimen of *Castilloa elastica*, showing branch and leaf-scar, of natural size.

Fig. 4. Enlarged view, part of stem of fig. 2, showing leaf-scar in a different aspect.

Figs. 5 and 6. A profile and end view, showing the articular surface of a fallen branch of *Castilloa elastica*, slightly enlarged.

Fig. 7. Angle of junction of a stem and branch of *Phyllanthus juglandifolius*; *sl*, scale-like leaf.

Fig. 8. A portion of the stem, branches, leaves, and flowers of *Phyllanthus* (*Reidia*) *glaucescens*: *bd*, bud growing into permanent branch subtended by deciduous branch-bearing flowers; *sl*, scale-like leaf. Also from a plant growing at Kew and sketched of about nat. size.

Remarks on the Distribution of the Perfoliate Penny-Cress (*Thlaspi perfoliatum*, Linn.) in Britain. By GEORGE S. BOULGER, Esq., F.L.S., F.G.S.

[Read May 3, 1877.]

THE insignificant little Crucifer a few notes on which I wish to lay before the Society, derives its chief interest to us from its very limited area of distribution in Great Britain.

Dr. Hooker, in his 'Student's Flora,' gives its general distribution as "Middle and South Europe, North Africa, and North and West Asia," and its British locale and habitat as "Limestone pastures, rare; Oxfordshire and Gloucestershire." Mr. Hewett Watson, in the 'Cybele Britannica' (1846, vol. i. p. 118), writes of it as follows:—"South limit in Oxfordshire and Gloucestershire. North limit in the same countries. Estimate of provinces 2. Estimate of counties 2. Latitude 51°–52°. Local type of distribution. Agrarian region. Inferagrarian zone. Descends to —— ? Ascends to —— ? Range of temperature (48°) ? Native. Rupestral ? An extremely local plant, the area of which has been greatly extended through misapplications of the name. Apparently it is quite limited to the two adjoining counties indicated."

The reference here is to an erroneous record of the plant in the north of England.

"But," Watson continues, "the dividing line between those counties being also the dividing line between the eastern province of Thames and the western province of Severn, the species will stand proportionably higher in a provincial census than in one founded on counties. I cannot state anything exactly concerning the altitude or local situations in which this *Thlaspi* is found, and am consequently uncertain as to the temperature."

There are no specimens of the species in Dr. S. P. Woodward's Herbarium, now at the Cirencester Agricultural College, which was collected just before the publication of the 'Cybele.' I am not aware what other localities may have been recorded in Oxfordshire; but, I believe, Burford, only two miles from the Gloucestershire border, was always considered the most important. I have not heard of its occurrence there of late years.

Some years ago Professor Buckman, F.L.S., found the species, for several successive seasons, a little to the south-west of the village of Sapperton, in Gloucestershire, by the side of a road leading down the Sapperton branch of the great Stroud valley, the escarpment of the Great Oolite. This locality is just within the Severn drainage-area, and about a mile from one I shall mention presently. I visited it in vain last year.

In 1868 or '69 Professor Thiselton Dyer found the species about 300 yards west of the Tetbury-Road Station, well known to geologists for the interesting local patch of Bradford Clay. The plant was there growing on the side of the railway-embankment, on pure limestone. Professor Dyer described the locality and figured the plant most admirably in the 'Proceedings of the Cotteswold Club.' I believe either Professor Dyer or Professor Duthie also found it about a mile up the line westward, at Hayleigh Wood.

On the 2nd of last May and several succeeding days I visited these localities on the Great Western Railway, and found the plant growing in abundance on the embankments, on the ballast heaps, and between the rails. I traced it westward, with breaks of never more than two or three hundred yards, from Tetbury-Road Station, through Hayleigh Wood, to the mouth of the shorter of the two railway-tunnels at Sapperton. Climbing up the cutting I found it again on the top and traced it to a waste-heap over the tunnel. This was the furthest westward extension I could find, and is one of the highest points in the neighbourhood, being, I believe, nearly 500 feet above mean sea-level. On my map of the county I have drawn the line of watershed between the Thames and the Severn only a few yards west of this point.

I then returned to the Tetbury-Road Station and traced the *Thlaspi* eastward, beyond the station and viaduct, which marks the boundary of the county of Wilts, to a point just west of another archway, about halfway between Tetbury-Road and Kemble stations—that is, about half a mile over the county boundary.

Though this is not much on which to add a new county to the distribution of the species, it is about as much over the border as the well-known sole locality for *Carex tomentosa* at Marston Maisey; and, as I have mentioned, Burford is only two miles from Gloucestershire.

I had a specimen alleged to have been found on the College Farm at Cirencester, brought to me by one of the students; and Mr. S. F. Elton, of Cirencester, to whom I am indebted for much botanical information, has a specimen which he believes is from Baunton, rather more than a mile north-west of Cirencester. Finally Professor Church believes he has seen the species growing at Foss-bridge. If this last locality is confirmed it will be interesting as uniting that of Burford with the Sapperton-Kemble one, and as indicating that this calcareous waste-heap plant may have spread along the ancient Ackman Street.

The general distribution assigned to the species by Dr. Hooker may be, I suppose, expressed as the Old-world north temperate zone; but the term "rupestral" applied to its habitat by Mr. Hewett Watson is far more nearly accurate than Dr. Hooker's

"Limestone pastures." I doubt whether this species could possibly survive in a pasture. Its radical leaves do not usually form a strong rosette; and all the spots where I have seen it were composed of loose limestone destitute of other plants. If it cannot be termed a "pascual" plant, it tells us little to term it "viatical." The exposed situations in which it occurs would render "glareal" an appropriate term, had not Mr. Watson himself confined it chiefly to sand and gravel. Most "rupestral" plants certainly are "calcophiles;" so perhaps we must use that term in default of a better. Estimated roughly, the range of altitude I have observed is from about 360 feet to nearly 500 feet above mean sea-level.

The fact of the boundary between Oxfordshire and Gloucestershire coinciding with that between Watson's provinces of Thames and Severn, and that between Gloucestershire and Wiltshire with that between the Severn and Channel, illustrates very forcibly the unfortunately artificial characters of those provinces, which their author himself points out.

As a matter of fact, Professor Buckman's Sapperton locality alone is barely within the Severn basin; and all the others, including that in Wiltshire, are in the Thames area.

P.S.—Since writing the above I find that Sir William Hooker records *Thlaspi perfoliatum* at Burford, Naunton, and Seven Springs, near Stow-on-the-Wold, in 1818; and Bagster, in 1839, as abundant at Foss-bridge. In the 6th ed. of 'The British Flora' of Hooker and Arnott it is also mentioned as occurring on stone walls about Kineton, Warwickshire. In 1844 Professor Buckman, in his 'Botany of Cheltenham,' writes, "about the stone quarries, at Kyneton Thorns, Harford Bridge, and the Seven Springs, Naunton. These habitats are perhaps the only ones . . . . as it has been lost from . . . . Burford." In Deakin's 'Florigraphia Britannica' (1845) "Burford and Upper Slaughter Oxfordshire; Kineton, Gloucestershire," are given. Kineton is about ten miles from the Warwickshire border, Upper Slaughter almost as many from that of Oxfordshire, both places being in Gloucestershire. There is an unauthenticated record from near Bristol.

List of Hepaticæ collected by the Rev. A. E. Eaton at the Cape of Good Hope (August and September 1874). By William Mitten, A.L.S.

[Read April 5, 1877.]

(Plates IV. & V.)

With two exceptions, the species enumerated in the following list were collected on the Cape-Town side of the base of Table Mountain and Lion Mountain, within the area bounded by the town, the cliffs of the two mountains, and the summit of the saddle-like Kloof between them. The Round House is only just beyond the brow of the Kloof. Two species were obtained near Klasenbosch Kloof on the opposite side of Table Mountain. Many more forms, no doubt, could be obtained along the remaining flanks of these mountains and on the hills near Simon's Town.

Plagiochila, *Nees et Mont.*

Plagiochila javanica, *Swartz* (Jungermannia).—*Lindenberg, Spec. Hepat.* t. 4.

Hab. Base of Table Mountain near Cape Town.

Stems nearly simple, without fruit. Lindenberg conjectured that Thunberg had made a mistake in giving Java as the locality for this species, no specimens having been seen since from that country; but it is generally present in collections from the Cape of Good Hope.

P. sarmentosa, *Lehm.*—*Lindenb. Spec. Hepat.* t. 18.

Hab. Base of Table Mountain near Cape Town.

The specimens are barren, in which state only this plant is yet known.

Jungermannia, *Linn.*

Jungermannia colorata, *Lehm.*

Hab. Base of Table Mountain.

Growing with *Pœcilophyllum Zeyheri* (C. Muller), *Dicranum dichotomum*, Beauv., and *Hedwigidium imberbe*, in large brown tufts. All without fruit.

Cephalozia, *Dumort.*

Cephalozia tenuissima, *Lehm.*—(Jungermannia).

Hab. Base of the Lion's Head, on damp soil, above the Kloof road, Cape Town.

Scattered stems with perianths are observable with *Fossombronia tumida*, and *Fimbriaria marginata*. It is a very minute species, nearly allied to *C. dentata*, Raddi.

LOPHOCOLEA, *Dumort.*

LOPHOCOLEA BIDENTATA, *Linn.*—(Jungermannia).

Hab. On the bank of a stream on the Cape-Town side of the base of Table Mountain.

Barren specimens, which appear to belong to this species.

L. SEMITERES *Lehm.*—(Jungermannia.)—Chiloscyphus semiteres, *Lehm. et Lindenb.*; *Gottsche Lindenb.* et *Nees. Syn. Hepat.* 190.

Hab. Base of Table Mountain, near Cape Town.

A small species nearly allied to the *L. heterophylla* of Europe, and strongly exhaling the same aromatic odour. The perianth is terminal, of an ovate outline, the angles alate for about half their length, the alæ being obtuse and but little dentate, the three lips at the apex obtuse and shortly dentate. The involucral leaves ovate, bidentate at their apices, with a few short teeth at their margins on both sides, combined at their bases with the obovate stipule, which at its apex is shortly toothed. As the leaves approach the perianth they become gradually more and more distinctly bidentate. Fertile specimens were gathered by Mundt.

CHILOSCYPHUS, *Corda.*

CHILOSCYPHUS EXPANSUS, *Lehm.*—(Jungermannia).

Hab. On a bank near trees on the side of a stream below the Kloof road, Cape Town.

Specimens barren. The species is not unlike *Lophocolea heterophylloidea*, Nees.

NOTOSCYPHUS, *Mitt. in Seemann, Fl. Viti.* 418.

NOTOSCYPHUS VARIIFOLIUS, *Mitt.* Caulis prostatus radicans. Folia antice incurva subquadrato-rotunda obtusissima integerrima e cellulis hexagono-rotundatis areolata pellucida. Amphigastria caule vix latiora ovata profunde bifida laciniis lanceolatis erectis. Folia versus involucrum acute obtuseve bidentata, involucralia majora marginibus ventralibus coadunatis dorsalibus ad medium usque liberis apicibus obliquis retusis. Amphigastrium involucrale liberum latius, laciniis inferne extus unidentatis. (Pl. IV. figs. 1–4).

Hab. On red earthy clay, and also on yellowish clay banks by a stream near Orange Grove, Cape Town.

Stems forming pale whitish-green patches. Leaves spreading or incurved, here and there tinged slightly with red, about a third of a line in diameter, with pellucid cells sharply defined by narrow walls. Near to this, but differing in its more orbicular leaves, with larger cells and less divided stipules, is the *Alicularia flexuosa* (Lehm.), Gottsche, Lindenb. et Nees, Syn. Hep. 11, which may be found to be congeneric when fertile specimens have been gathered. In the fructification, so far as can be seen from the specimens without capsules, the involucre resembles that of *N. lutescens*, Lehm. et Lindenb., and *N. Belangerianus* eorund. (*Jungermannia*), both of which were placed, in the 'Synopsis,' in *Gymnomitrium*. All the species emit many rootlets under the involucre, and seem to approach nearly to the genera which have a descending torus, as in *Lindigina*.

LINDIGINA, Gottsche.

LINDIGINA SCARIOSA, *Lehm.—Pug.* iii. (Jungermannia); Gymnomitrium scariosum, *Gottsche, Lindenb. et Nees, Syn. Hep.* 3. Caulis prostratus simplex crassus inferne radiculosus ex apice innovans. Folia sursum secunda conniventia arctissime imbricata opposita antice basi anguste combinata reniformia concava integerrima margine pallidiore scarioso limbata cellulis hexagonis parietibus angustis pellucidis in folii medio granulis repletis areolata. Perigynium tubulosum fuscum radiculosum longe in terram descendens. (Pl. V. figs. 1–6.)

Hab. On damp clayey soil in a field above the Kloof road beside the pine-plantation near Cape Town.

The specimens agree with those gathered by Ecklon. The species is minute and seems to plough its way along the surface of the earth by its thick stem, the leaves are so closely imbricated as to appear on the upper surface like an uninterrupted edge; and it is only when separated by the needle that their form or position is discernible. The outline of the leaves is reniform, the wider end being that towards the underside; no important modification of the leaves around the apex of the perigynium is observable; but no plants have been seen with capsules, and therefore none completely matured.

Very near to this species is the *Lindigia Liebmanniana*, Gottsche, Mex. Leverm. 120, t. 20 (*Gymnanthe*), from Mexico, which has leaves, according to the figure, of a reniform outline ; and probably they are connected on the dorsal side, although on this point the description is silent. The genus *Lindigia* was changed to *Lindigina*, Gottsche, "Prodr. Fl. Novo-Granatensis" in 'Ann. des Sc. Nat.' 4me série, tom. i. 1864, *Lindigia* having been employed by Hampe for some species of *Meteoria*, of which the *Leskia aciculata*, Taylor, is one.

L. scariosa in the 'Synopsis' is described with leaves "lato rotundis," and in the 'Mexikanske Levermosser' *L. Liebmanniana* with leaves "obovatis cauli oblique adcretis ;" amongst further particulars below, they are "ovato-rotunda obovatave." Fortunately there is a good figure of this species, exhibiting the leaves to be really reniform, as in *L. scariosa* ; or identification, from the description alone, would be in either case almost impossible.

Fragments have been seen of another species of the *Lethocolea* group from the Cape of Good Hope, which may be the same as the *L. prostrata* from Tristan d'Acunha.

In the 'Handbook of the Flora of New Zealand,' in ignorance of *Lindigina*, *Lethocolea* was employed to designate some species which agree with those referred by Gottsche himself to *Lindigina*, yet in some respects differ from it if *L. Liebmanniana* is taken as the typical species, and also if its leaves are opposite and combined ; it would then, with *L. scariosa* and *L. renifolia* and some other Mexican and South-American species, all with opposite and combined leaves on the dorsal side, form a group with a more lax areolation than is observable in the *Lethocolea Drummondii* and *L. concinna* of the Tasmanian flora, and also in the *Lindigina Granatensis*, Gottsche, " Prodr. Fl. N.-Granat." in 'Ann. des Sc. Nat.' 5me sér. tom. i. 1864, 137, in all which the leaves are alternate and of more dense substance.

In a Mexican species belonging to the opposite-leaved section of *Lindigina* the male inflorescence consists of antheridia in the saccate bases of cauline leaves as in *Lophocolea*.

L. RENIFOLIA, *Mitt.* Caulis prostratus simplex ex apice innovans subtus radiculosus. Folia opposita sursum incurva conniventi-imbricata reniformia apice lata truncata inflexa basi antice cum folio opposito anguste connexa integerrima e cellulis rotundo-hexagonis areolata. Perigynium tubulosum longe in terram descendens radiculosum. (Pl. V. figs. 7-12).

Hab. On hard bare damp soil in the interspaces of the brushwood (*e.g.* a footpath) on the summit of the ridge of the Lion's Rump near the Signal-station.

Stems three or four lines long, with the leaves from half to three quarters of a line wide. Leaves all whitish green, closely imbricated on each side so as to leave a furrow along the middle, although the stem itself is everywhere covered. The perigynium, of a pale brownish colour, has many scattered hair-like roots; its transverse section shows it to be composed of about six strata of cells, of which the interior consists of much longer somewhat ovate cells affixed by their bases, the narrower ends being free. Very different from *L. scariosa* in its greater stature, and in the imbrication of its leaves (which have no scarious margin), but approaching in the outline of the leaf.

CALYPOGEIA, *Raddi.*

CLYPOGEIA BIDENTULA, *Web.*—(Jungermannia), *Nees ab E.*; *Gottsche, Lindenb. et Nees, Syn. Hepat.* 199.

Hab. Near Cape Town, above the Round House, Kloof road.

Stems all barren.

LEPEROMA, *Mitt. in Handbook of New-Zealand Flora*, ii. p. 754.

LEPEROMA OCHROLEUCA, *Spreng.*—(Jungermannia).

Hab. Base of Table Mountain near Cape Town.

Small barren specimens with *Lepidozia truncatella.*

LEPIDOZIA, *Dumort.*

LEPIDOZIA TRUNCATELLA, *Nees ab E.*

Hab. Base of Table Mountain, near Cape Town.

In patches associated with *Plagiochila sarmentosa, Dicranum dichotomum,* and *Pœcilophyllum Zeyheri,* C. Müller, without fruit.

RADULA, *Dumort.*

RADULA COMPLANATA, *Linn.*—(Jungermannia).

Hab. Base of Table Mountain, near Cape Town.

The specimens are in that form which has the margin of the leaf fringed with gemmæ.

R. PHYSOLOBA, *Mont.*—*Bot. Crypt. Itin. Astrolabe*, t. 17. f. 4.

Hab. Base of Table Mountain, near Cape Town.

Without fruit or inflorescence.

LEJEUNIA, *Libert.*

LEJEUNIA XANTHOCARPA, *Lehm. et Lindenb.*—*Gottsche, Lindenb. et Nees, Syn. Hep.* 330.

Hab. Base of Lion Mountain, above the Round House, Kloof road, Cape Town.

Very few perianths are present.

L. RUFESCENS, *Lindenb.—Gottsche, Lindenb. et Nees, Syn. Hepat.* 366.

Hab. Base of Table Mountain, near Cape Town.

This species has not been before reported from the Cape of Good Hope; it is, however, widely dispersed in austral regions. The specimens agree with those from Magellan, and are fertile.

L. CAPENSIS, *Gottsche—idem, Lindeb. et Nees, Syn. Hepat.* 374.

Hab. Base of Table Mountain, near Cape Town.

With *Radula complanata.*

L. ECKLONIANA, *Lindenb.—Gottsche, Lindenb. et Nees, Syn. Hepat.* 381.

Hab. Base of Table Mountain (exact site doubtful).

L. TABULARIS, *Spreng. Syst. Veg.* iv. 325—(Jungermannia).

Hab. Base of Table Mountain, near Cape Town (probably beside a stream, on a bank).

Growing with *Leptodon Smithii* and other mosses, but without perianths.

L. MINUTISSIMA, *Sm. Eng. Bot.* 1633.—(Jungermannia).

Hab. On the bark of poplar trees beside the stream at the commencement of Kloof road, Cape Town; also on the bank of the same stream nearer the quarry.

The small stems of this on bark and mixed with other species are not sufficient to decide if there are more than one South-African species similar to the European species.

L. HAMATIFOLIA, *Hook. Brit. Jung.* t. 51.

Hab. Base of Table Mountain, near Cape Town.

Without fruit, but presenting no difference in colour, stature, or habit from British examples; it has not been before received from the Cape of Good Hope.

FRULLANIA, *Raddi.*

FRULLANIA CAPENSIS, *Gottsche—idem, Lindenb. et Nees, Syn. Hepat.* 449.

Hab. On boulders and rocks near the quarry at the base of Table Mountain near Cape Town.

F. TRINERVIS, *Lehm. et Lindenb.—Gottsche, Lindenb. et Nees, Syn. Hepat.* 427.

Hab. On a tree in the public avenue near Government House; also on trees near a stream above Orange Grove, and on rocks in the same place as the preceding species, or just above the Round House, Kloof road, Cape Town.

F. BRUNNEA, *Spreng.*—(Jungermannia).—*Gottsche, Lindenb. et Nees, Syn. Hepat.* 441.

Hab. Base of Table Mountain, near Cape Town (exact site doubtful).

This pretty species, in the apiculate leaves and in the slender form and the position of its lobules, resembles the species of *Polyotus.*

FOSSOMBRONIA, *Raddi.*

FOSSOMBRONIA CRISPA, *Nees ab E.—Gottsche, Lindenb. et Nees, Syn. Hepat.* 569.

Hab. Base of Table Mountain, near Cape Town (exact site doubtful).

With *Fissidens rufescens*, Hornsch.

F. LEUCOXANTHA, *Lehm. et Lindeb. in Linnea*, iv.

Hab. Base of Lion's Head, on damp ground.

F. TUMIDA, *Mitt.* Caulis prostratus simplex brevis. Folia sursum incurva tumide imbricata conniventia ambitu rotundata concava integerrima e cellulis laxis pellucidis anguste limitatis areolata. Perianthium turbinatum margine repando-subdentato. Capsula magna sporis hemisphæricis obscuris papillosis. (Pl. IV. figs. 10 to 13.)

Hab. On damp ground near the pine-plantation at the foot of the Lion's Head, near the beginning of the Kloof road, Cape Town.

Stems from 2 to 4 lines long, the rootlets purple as usual in the genus, with the leaves a line wide. Leaves whitish green tinged with purplish brown, imbricated in such a manner that the plants have the appearance of being inflated when wet—which partly remains in the dry state, as they do not become crisped or contorted.

In many respects this species agrees with the *F. intestinalis*, Taylor, from Australia; but in that the spores are almost smooth and without evident papillæ.

SYMPHOGYNA, *Mont. et Nees.*

SYMPHOGYNA PODOPHYLLA, *Thunb.—Gottsche, Lindenb. et Nees, Syn. Hep.* 481.

Hab. In a kloof near Klasenbosch Wynberg, growing at the foot of trees in cæspitose masses and sheets, partly in and partly out of a stream, but exposed to the spray. Barren.

ANEURA, *Dumort.*

ANEURA MULTIFIDA, *Linn.*—(Jungermannia).

Hab. Wynberg side of Table Mountain, with *Symphogyna podophylla*, but more fully exposed to the water.

Differing slightly from European specimens in the more numerous branches, but without fruit.

METZGERIA, *Raddi.*

METZGERIA FURCATA, *Linn.*—(Jungermannia); var. β, minor, *Syn. Hepat.* 502; var. δ 1. *æruginosa, l. c.* 502.

Hab. Beside a streamlet above Orange-grove, Cape Town, on the bark of an oak tree, and on the ground.

LUNULARIA, *Micheli.*

LUNULARIA CRUCIATA, *Linn.*—(Marchantia).

Hab. On clayey soil at the side of a ditch bounding a pine-plantation near the commencement of the Kloof road, and in a field on the opposite side of the road at the base of the Lion's Head, and also near the Round House. Common.

A few barren fronds with gemmæ establish the presence of this or a nearly allied species in South Africa.

FIMBRIARIA, *Nees ab E.*

FIMBRIARIA MARGINATA, *Nees ab E.*

Hab. On damp ground. Near the first pine-woods along the Kloof road, Cape Town.

Growing with *Archidium capense*, Hornsch., and other small mosses. Specimens with perfected fruit.

TARGIONIA, *Micheli.*

TARGIONIA CAPENSIS, *Hueben.*

Hab. In the same place as the preceding.

RICCIA, *Micheli.*

RICCIA ALBOMARGINATA, *Bischof. Gottsche, Lindenb. et Nees, Syn. Hep.* 604.

Hab. At the base of the Lion's Head.

Some small fronds amongst *Fossombronia tumida* appear to be this species, which in the living state does not present distinctly the white margin; but after drying and again macerating in water, it becomes evident.

R. PURPURASCENS, *Lehm. et Lindenb. Gottsche, Lindeb. et Nees, Syn. Hep.* 611.

Hab. On damp soil near the Round House, and other parts of the Kloof road, Cape Town.

This species is very near to *R. fluitans*; and the plants grow very well floating on water, but become more slender and less green.

R. LIMBATA, *Bisch.—Gottsch., Lindenb. et Nees, Syn. Hep.* 606.

Hab. At the base of Lion Mountain. Growing amongst *Fossombronia tumida.*

The spores of this species are almost black, shining, and minutely pitted.

ANTHOCEROS, *Micheli.*

ANTHOCEROS MINUTUS, *Mitt.* Frons pusillus lobis obovatis retusis obtusisve teneris lævibus costa media obscura notatis, involucrum magnum ventricosum. Theca cylindracea basi angustata subpedunculata apice calyptra conica obtecta lævis sicca longitudinaliter plicata sporis rotundis lævibus. (Pl. IV. figs. 5 to 9.)

Hab. Base of Lion Mountain, in wet places near the Kloof road, above the Round House.

Fronds growing in patches with lobes about a line and a half long, scarcely half a line wide; when dry, blackish. Substance when wet, of thin-walled bladdery cells, towards the margins of the lobes in three strata, which are continued across the width of the frond; in the middle, beneath, are a mass of brown obscure cells constituting the costa, which is seen through the frond; below this costa is another series of three strata of cells, which are thin-walled and pellucid. The involucre is large for the size of the plant; it consists of a pale-brownish membrane of a nearly oval form; from this the capsule, rather more than a line long, is exserted; in the wet state it appears straight; but dry (in the unripened state), strongly plicate; at its apex it bears the small campanulate calyptra of a brownish colour. Within the capsule is a slender columella, round smooth spores, and short moniliform threads scarcely exceeding in length the diameter of the spores.

DESCRIPTION OF PLATES.

Plate IV.

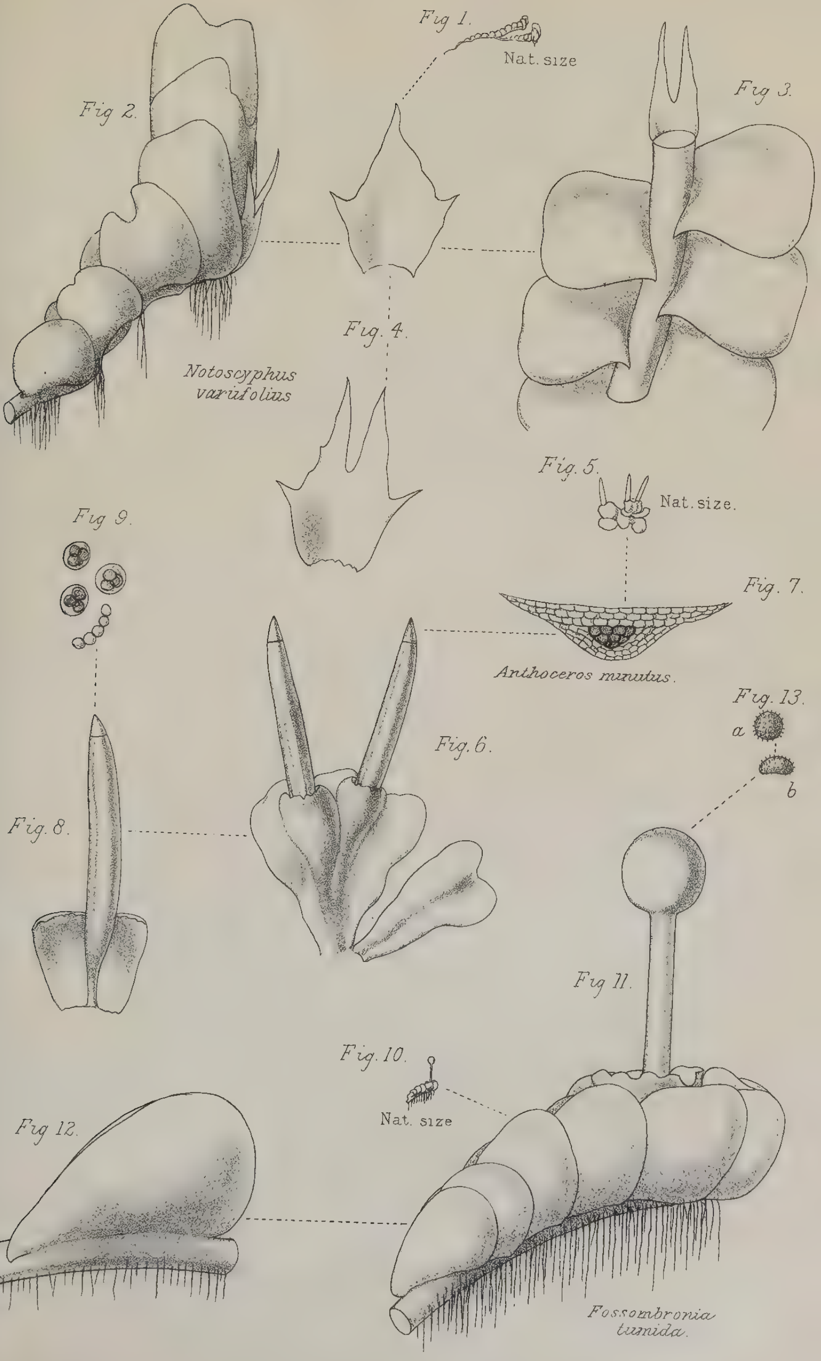
Fig. 1. *Notoscyphus variifolius.* Stem, of the natural size.
2. A portion of the same, with involucre, as seen at the side. Magnified.
3. A portion of the stem with leaves and stipule. Also highly magnified.
4. Two stipules next to the involucre, still more enlarged.
5. *Anthoceros minutus.* Plants of the natural size.
6. A portion, with involucres and fruit, surmounted by the minute calyptra. Magnified.
7. A transverse section of a frond with the central mass, which gives it a costate appearance. Also much enlarged.
8. Involucre laid open to show the pedicellate base of the capsule. Magnified.
9. Spores and elater. Also greatly magnified.
10. *Fossombronia tumida.* A stem, of the natural size.
11. Apex of the stem, with leaves, perianth, and capsule, as seen laterally. Greatly enlarged.
12. A single leaf, still more highly magnified.
13. Spores, also greatly magnified: *a*, as seen vertically; and *b*, lateral view.

Plate V.

Fig. 1. *Lindigina scariosa.* Stem, of the natural size.
2. A stem, as seen from above, and considerably enlarged.
3. Apex of the same, more enlarged, and as seen laterally with the descending perigynium.
4. A portion of the stem, with the leaves opened to show their combination on the upperside. Also very considerably enlarged.
5. Cellular structure of the leaves towards the vertical margin, under a higher power of the microscope.
6. Cellular structure of the same towards the dorsal margin, also under a high power.
7. *Lindigina renifolia.* A stem, of the natural size.
8. The apex, with leaves and descending torus of the same, as seen laterally, and considerably enlarged.
9. A portion, more enlarged, of the stem, with leaves expanded.
10. A leaf removed from the stem.
11. The cellular structure of the leaf towards the ventral margin, under a high power of the microscope.
12. A portion of the transverse section of the perigynium, showing the larger partially free cells composing its interior surface. Highly magnified.

W Mitten.

LINN. SOC. JOUR. BOT. VOL. XVI. PL. IV.



N.Fitch lith.

NEW CAPE HEPATICÆ.

Fitch imp.

W.Mitten.

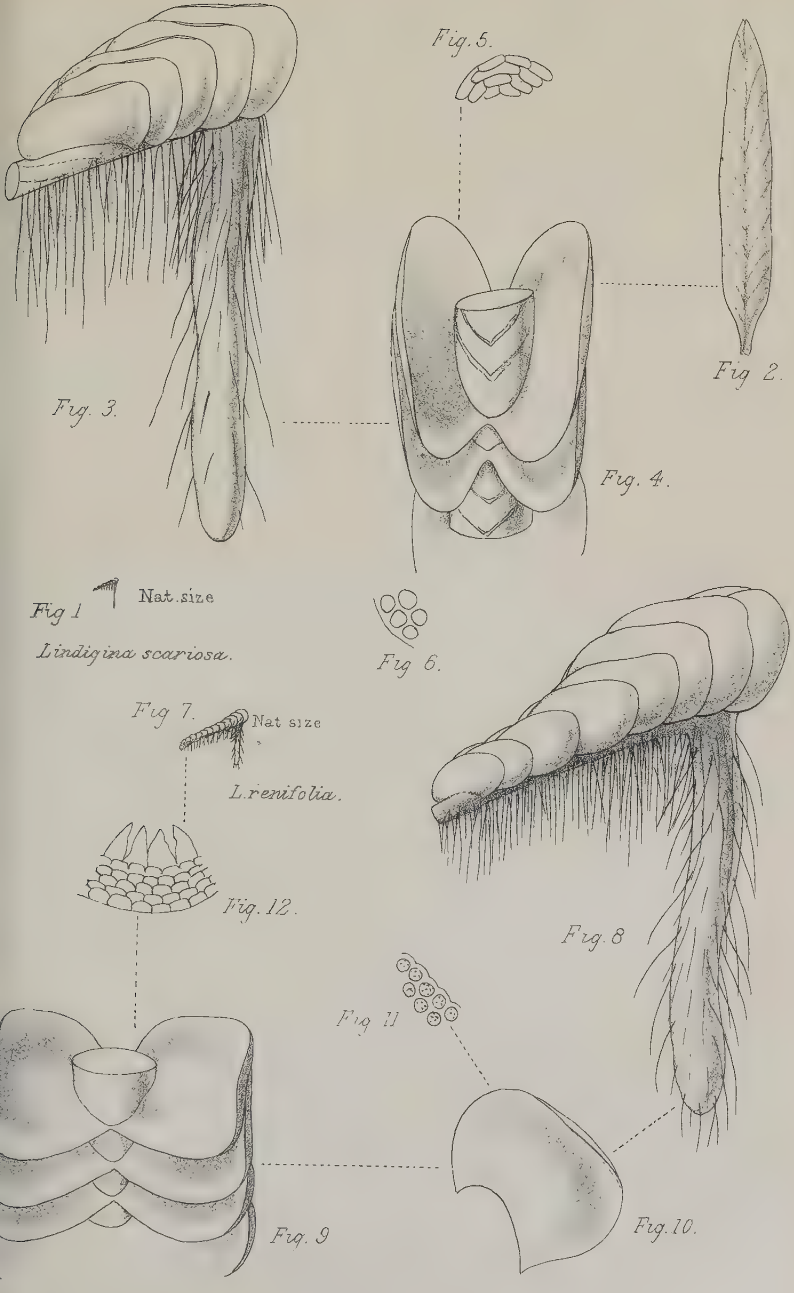


Fig. 5.
Fig 2.
Fig. 3.
Fig. 4.
Fig 1
Nat. size
Lindigina scariosa.
Fig 6.
Fig 7.
Nat size
L. renifolia.
Fig. 12.
Fig. 8
Fig 11
Fig. 9
Fig. 10.

NEW CAPE HEPATICAE.

Fitch lith.
Fitch imp.

On a Collection of Ferns made by Miss Helen Gilpin in the interior of Madagascar. By J. G. Baker, F.L.S.

[Read April 15, 1877.]

Last session, I laid before the Society an account of a collection of Ferns, made in the interior of Madagascar, which had been presented to the Kew herbarium by Mr. W. Pool (Proc. Linn. Soc. vol. xv. p. 411). This spring I have had the opportunity of studying in detail another collection, made principally in the neighbourhood of Antananarivo by Miss Helen Gilpin, of the Friends' Foreign Mission Association, who has lately returned temporarily to England after a residence of many years in the capital of the island. Miss Gilpin's collection contains about 150 species of Ferns and the allied orders. In reporting upon it I shall not repeat the species included in my former list unless I have any thing fresh to say about them, and, as in my former paper, shall indicate, in the case of the novelties, by means of numbers prefixed to the names, the position into which the plants fall according to the arrangement adopted in our 'Synopsis Filicum.'

Gleichenia dichotoma, *Willd.*

Hemitelia Melleri, *Baker*, in fine fructification.

Trichomanes flabellatum, *Bory.*

T. rigidum, *Sw.*

Dicksonia Henriettæ, *Baker.* "Creeps up the branches of trees to a height of 20–30 feet."

19*. D. hypolepidoides, *Baker*, n. sp. Frond deltoid, 2–3-pinnate, 2–3 feet long and broad. Rachis dull grey, finely pubescent, not at all scaly. Texture moderately firm; both surfaces green and, especially the lower one, finely pubescent all over. Pinnæ lanceolate, acuminate, the lowest the largest, a foot or more long, 1–2 inches broad; lower pinnules lanceolate, acute, free, cut away cuneately on the lower side at the base, with deep obtuse close erecto-patent entire lobes $\frac{1}{8}$–$\frac{1}{6}$ in. broad. Veins erecto-patent, fine, distant, forked or subpinnate in the lowest tertiary segments. Sori regularly seriate at the base of the ultimate sinuses, one to each, placed on the upper side of the ultimate lobes. Involucre a depressed round cup, $\frac{3}{4}$ line broad, highest on the inner side. General habit and texture like that of *Davallia strigosa.*

D. flabellifolia, *Baker.* Under the great rock at the left-hand side of the waterfall of Andrangaloaka.

16*. Lindsaya madagascariensis, *Baker*, n. sp. Stipes (incomplete) glossy, brown, naked. Frond deltoid, bipinnate, membranous, bright green, glabrous, 5–6 in. long and broad. Lower pinnæ the largest, lanceolate, 2–3 in. long, 1–1½ in. broad at the base. Pinnules cuneate or rhomboid, ¼–½ in. broad, the lower ones shortly petioled, entire on the inner and lower borders, regularly rounded or somewhat angled for the rest of the edge, and irregularly denticulate. Veins few, distant, free, dichotomously forked. Sori distinctly intramarginal, the inner valve of the involucre narrow and membranous, the outer simply the unaltered denticulate upper and outer edge of the pinnule produced the breadth of the sorus beyond it.

We received a small specimen of this in 1874 from the interior of Madagascar, from Lady Barkly, gathered by Mr. Cameron. The general habit of the plant is completely that of *L. flabellulata*, in which the sorus is marginal and the two valves of the involucre are of equal breadth.

Var. intermedia, *Baker*. Pinnules again divided into cuneate tertiary segments ¼–⅙ in. broad at the tip.

Var. davallioides, *Baker*. Frond decompound, the pinnæ more deltoid than in the type, cut up entirely into laxly disposed ultimate segments ½–1 line broad at the tip, and the sori and involucre just those of *Davallia*, § *Odontoloma*.

Bears the same relation to the type that the Ceylonese *Davallia schizophylla*, Baker, Syn. Fil. edit. 2, p. 468, bears to *Lindsaya tenera*, and completely connected with the type by Miss Gilpin's fine set of specimens.

Lonchitis pubescens, *Willd.* The typical form, in addition to *L. madagascariensis*, Hook., and *L. polypus*, Baker, both of which are copiously represented in this collection.

13*. Cheilanthes (Adiantopsis) madagascariensis, *Baker*, n. sp. Stipe (incomplete), like the rachises, naked, glossy, castaneous. Frond subdeltoid, 3–9 inches long, 2–7 in. broad, chartaceous, green, glabrous, 3–4-pinnate. Pinnæ deltoid, patent, short-petioled, lowest the largest, 2–2½ in. broad, produced on the lower side. Pinnules oblong-deltoid, sessile or the lowest shortly petioled; tertiary segments oblong, obtuse, more produced on the upper side at the base, with a few obtuse lobes. Veins dichotomous, flabellate. Sori few, round, distinct, placed at the end of the ultimate lobes. Involucre glabrous, hemispherical.

Very close to the South-American *C. chlorophylla*, Sw., with which it quite agrees in texture and sori.

Adiantum lunulatum, *Burm.*

A. hispidulum, *Sw.*

Pellæa pectiniformis, *Baker.*

P. angulosa, *Baker.*

Pteris cretica, *L.*

14*. P. remotifolia, *Baker.* Stipe ½–1 foot long, like the rachises, glossy and stramineous. Frond 1–2 feet long and broad, deltoid, bright green, moderately firm in texture, glabrous, simply bipinnate, or in some of the specimens the lowest pinnules dilated and again pinnate. Pinnæ 3–7, lanceolate, the lowest the largest, 1¼–4 in. broad, caudate at the tip. Pinnules sessile, lanceolate, laxly disposed, 1–2 in. long, 2 lines or (the barren ones) 3 lines broad, cuneate at the base on both sides, subobtuse, the upper ones patent, many lower, more or less deflexed. Veinlets 15–30-jugate, very distinct, usually forked at the base. Sorus absent from the tip and base of the pinnules. Barren segments entire.

This is the plant mentioned in the account of Mr. Pool's collection as a probable new species midway between *P. quadriaurita* and *madagascarica*.

P. triplicata, *Agardh.* Miss Gilpin's specimens show conclusively that the Madagascar *P. Melleri*, Baker, is conspecific with *P. triplicata*, of Mozambique.

Lomaria biformis, *Baker.* Miss Gilpin's gatherings materially widen the range of variation here, as in some of the barren fronds the pinnæ are quite entire, and in others the upper pinnæ are entire and the lower ones regularly pectinato-pinnatifid.

Asplenium lunulatum, *Sw.* Besides the type, this collection includes characteristic examples of the varieties *harpeodes* and *Macræi*.

A. oligophyllum, *Kaulf.* This is a Brazilian species; but I cannot distinguish Miss Gilpin's Madagascar specimens and one received in 1874 from Lady Barkly, gathered by Mr. Cameron, from the Brazilian plant.

A. lætum, *Sw.* This, again, is only known previously in America; and we had it also from Lady Barkly, gathered by Mr. Cameron.

A. affine, *Sw.*, var. Pecten, *Baker.* Pinnæ regularly pectinato-pinnatifid, acuminate, many upper with all the lobes except the lowest on the upper side small, ligulate, erecto-patent and parallel. *A. affine* seems to be as variable in cutting in Madagascar as *A. lineatum* is in Mauritius, running into dareoid forms, both bipinnate and tripinnate and sometimes taking root at the tip; and yet, as known elsewhere, it keeps to the same characters over a wide geographical range.

109*. ASPLENIUM GILPINÆ, *Baker*, n. sp. Stipe (incomplete) green and scaleless, like the rachis. Frond oblong-lanceolate, bipinnate, under a foot long, 3–4 in. broad, membranous, glabrous. Pinnæ distant, short-petioled, lanceolate-acuminate, cut away cuneately on the lower side at the base, the lowest the largest, an inch broad, with shallow, close, erecto-patent, ligulate lobes in the upper, and a single free rhomboid pinnule on the anterior side at the base, which is $\frac{1}{2}$–$\frac{3}{4}$ in. long, $\frac{3}{8}$–$\frac{1}{2}$ in. broad. Veins distinct, erecto-patent, $\frac{1}{2}$ line apart, the lower compound, the upper simple. Sori median, 3–4 lines long, reaching neither the midrib nor the edge. Involucre narrow, persistent.

Very like the American *A. obtusifolium* in texture and the shape of the pinnæ, but in cutting coming near *horridum* and *protensum*.

126*. A. HERPETOPTERIS, *Baker*, n. sp. Rhizome about as thick as a goose's quill, flexuose, wide-trailing, nearly black, thinly clothed with spreading linear acuminate dark brown scales $\frac{1}{6}$ in. long. Fronds distant, with slender faintly scaly stipes about an inch long, brownish, like the slender rachis. Lamina lanceolate, 3–6 inches long, 1–2 inches broad at the middle, narrowed gradually to both ends, tripinnatifid, glabrous, moderately firm in texture. Pinnæ sessile, lanceolate-deltoid, the central ones $\frac{1}{2}$–1 in. long, $\frac{3}{8}$–$\frac{1}{2}$ in. broad, cuneate-truncate on the lower side at the base, cut down to the rachis at the base, the lower segments cuneate, the upper ones ligulate and not so deep. Veins erecto-patent, one central in each of the ligulate segments, flabellate in the cuneate ones. Sori median, $\frac{1}{8}$–$\frac{1}{4}$ in. long. Involucre narrow, glabrous, persistent.

Differs mainly from the small forms of *A. affine* by its slender, wide-trailing rhizome, and, like *affine*, running into a dareoid variety.

A. VIVIPARUM, *Presl*.

A. (ATHYRIUM) NIGRIPES, *Blume*. Miss Gilpin's set of *Athyria* show a wide range of variety; but I do not think any of them are safely separable from *nigripes*. In some of them the frond is narrowed gradually to the base; and in others the lowest pinnæ are as long as the central ones. There is a small form with the lamina not more than half a foot long, and yet copiously soriferous, and another with ultimate segments regularly, closely, and sharply incised to a depth of a line or more.

220*. Asplenium (Diplazium) brevipes, *Baker*, n. sp. Stipe (incomplete) slender, green, naked, like the rachis. Frond oblong-lanceolate, membranous, glabrous, simply pinnate, 6–8 in. long, 2–2½ in. broad at the middle, the lower pinnæ abbreviated. Pinnæ lanceolate, 10–12-jugate below the pinnatifid apex, the upper ones sessile, the lower distinctly petioled, the largest 12–15 lines long, ½ in. broad, obtuse, cuneate-truncate on the lower side at the base, produced on the anterior side and imbricated over the rachis, with shallow oblong lobes reaching in the lower part ¼–⅓ of the way down to the midrib. Veins pinnate opposite the lobes of the pinnæ, with 2–3-jugate ascending distinct veinlets. Sori usually one to each group on the lowest anterior fork, beginning at the base, but not reaching the tip, only few diplazioid. Involucre narrow, glabrous, persistent.

Andrangaloaka, 1871. Closely allied to the American *A. Shepherdi*, var. *caracasanum*.

Nephrolepis cordifolia, *Presl*.

10*. Nephrodium (Lastrea) trichophlebium, *Baker*, n. sp. Stipe (incomplete) naked, brownish. Frond oblong-lanceolate, bipinnatifid, 15–18 in. long, 4–6 in. broad, not narrowed at the base, moderately firm in texture, pale green and finely pilose beneath, dark green and glabrous beyond the midrib above, copiously marked with white dots on the margin; rachis brown, finely pubescent. Pinnæ lanceolate, only the lowest minutely petioled, lanceolate, ⅝–¾ in. broad, truncate at the base, cut down about halfway to the rachis into oblong obtuse lobes ⅙–⅛ in. broad. Veins in pinnate groups opposite the lobes of the pinnæ, with 4–6-jugate distinct erecto-patent veinlets, the lowest pair ceasing before they reach the edge and bearing each a sorus at the tip. Sori on the other veins median. Involucre brown, glabrous, persistent, ½ line broad.

Allied to *N. subbiauritum* and *punctulatum*, which, like *N. albopunctatum*, show the same copious white dots on the edge of the lobes of the pinnæ.

17*. NEPHRODIUM (LASTREA) SUBCRENULATUM, *Baker*, n. sp. Stipe (incomplete) slender, castaneous, furnished, as is the rachis, with a few minute, linear, brown scales, and a little pubescence. Frond oblong-lanceolate, membranous, glabrous, bright-green, bipinnatifid, 8–12 in. long, 4–5 in. broad. Pinnæ lanceolate, patent, cut down nearly to the rachis into obscurely crenate, obtuse lobes 2–2½ lines broad; the central pinnæ shortly petioled, ⅝–¾ in. broad, the lowest pair deflexed and produced on the lower side (¾ in. broad). Veins distinct, erecto-patent, 6–8-jugate, usually simple, but in the dilated segments of the posterior side of the lower pinnæ forked. Sori median. Involucre small, glabrous, persistent.

Most resembles *N. chrysolobum* and the small forms of *N. caripense.*

N. PATENS, var. MADAGASCARIENSE, *Baker*. Dwarf (lamina a foot long), densely pilose; many lower pinnæ gradually reduced; largest pinnæ 2 in. long, 4–4½ lines broad; segments at most a line broad, completely filled up with sori, 8–9 on a side; involucre persistent, densely pilose.

Recedes from the type in the direction of the pubescent varieties of *N. conterminum.*

45*. N. (LASTREA) ANATEINOPHLEBIUM, *Baker*, n. sp. Stipe (incomplete) grey, naked. Frond oblong-lanceolate, bipinnatifid, moderately firm in texture, glabrous, 1½–2 feet long, 7–8 in. broad, narrowed at the base; rachis finely grey-pilose, not scaly. Pinnæ sessile, lanceolate, acuminate, ¾–1 in. broad, cut down nearly or quite to the rachis into crenulate ligulate segments ⅙ in. broad. Veins 8–9-jugate, simple, erecto-patent, very distinct. Sori small, supramedian, on the veins. Involucre minute, fugacious.

Allied to *N. conterminum.*

53*. N. (LASTREA) LONGICUSPE, *Baker*, n. sp. Stipe (incomplete) naked, pale brown. Frond oblong-deltoid, bipinnatifid, 1½–2 feet long, 10–12 in. broad, the lower pinnæ suddenly dwarfed, the lowest represented by a gland only, moderately firm in texture, glabrous except on the midrib of the pinnæ beneath, which, like the scaleless pale-brown rachis, is finely pubescent. Pinnæ very numerous, sessile, linear, with a long cusp, ½ in. broad, cut down to a narrow wing into ligulate erecto-patent segments

½ line broad. Veins 10–12-jugate, simple, erecto-patent, distinct. Sori minute, median. Involucre minute, glabrous, persistent.

A very distinct plant, nearest *N. prolixum*, Baker, well marked by its long very narrow cuspidate pinnæ, very narrow segments, and copious minute sori.

NEPHRODIUM (LASTREA) BUCHANANI, *Baker*.

N. (EUNEPHRODIUM) PENNIGERUM, *Hook*.

183*. N. (EUNEPHRODIUM) COSTULARE, *Baker*, n. sp. Stipe (incomplete) green, naked, like the rachis. Frond oblong-deltoid, bipinnatifid, 2 feet or more long, a foot broad, membranous, bright green, entirely glabrous, or obscurely pilose on the midrib of the pinnæ beneath, not reduced at the base. Pinnæ all sessile, lanceolate, the lower ones 5–6 in. long, an inch broad, cut about ⅓ of the way down to the midrib into close oblong entire lobes ⅕–¼ in. broad. Veins 8–9-jugate, fine, erecto-patent, distinct, about three joining those of the next group by their tips. Sori small, costular. Involucre minute, fugacious.

This is the plant mentioned in the account of Mr. Pool's collection as a new species nearest *N. pennigerum*. Miss Gilpin's specimens are complete enough to enable me to characterize it.

N. (EUNEPHRODIUM) TRUNCATUM, *Presl*.

25*. POLYPODIUM (PHEGOPTERIS) FRAGILE, *Baker*, n. sp. Stipe (incomplete) slender, pale green, faintly pubescent. Frond oblong-deltoid, tripinnatifid, 6–9 in. long, 4–5 in. broad, bright green, membranous, with the veins on both sides densely ciliated. Pinnæ sessile, lanceolate, the lower ones 2–2½ in. long, ⅝–¾ in. broad, cut down to a narrow wing into oblong-oblanceolate pinnules, which are obtusely lobed ⅓–½ way down to the rachis; lowest pinnæ not reduced. Veins erecto-patent, forked or subpinnate in the lower tertiary lobes. Sori small, round, one to each tertiary lobe, placed near the tip of the anterior fork of the vein close to the bottom of the ultimate sinuses.

Resembling *Neophrodium flaccidum* in texture and cutting.

91*. P. (EUPOLYPODIUM) SYNSORUM, *Baker*, n. sp. Rhizome thread-like, wide-creeping. Stipes ¼–½ in. long, clothed with fine brown spreading hairs. Frond simple, coriaceous, ligulate, obtuse, cuneate at the base, 1–1¼ in. long, 2–2½ lines broad, glabrous. Veins simple, erecto-patent, hidden. Sori round, superficial, forming a row close to the midrib in the upper half of the frond, confluent, mixed with copious hairs.

91*. Polypodium (Eupolypodium) Gilpinæ, *Baker*, n. sp. Densely tufted. Stipes very short ($\frac{1}{4}$–$\frac{1}{2}$ in. long), clothed with fine brown spreading hairs. Fronds simple, ligulate, obtuse, 1–$1\frac{1}{2}$ in. long, $\frac{1}{6}$ in. broad, entire or obscurely repand, moderately firm in texture, narrowed from the middle to the base, thinly beset with erecto-patent brown hairs $\frac{1}{2}$ line long. Veins distant, simple, erecto-patent, thickened at the tip, and not reaching the edge. Sori round, superficial, $\frac{1}{2}$ line broad, median between the edge and the midrib, 8–12 on a side, with usually their own breadth between them.

149*. P. (Eupolypodium) perludens, *Baker*, n. sp. Stipe $\frac{1}{2}$–$\frac{3}{4}$ in. long, brown, wiry, flexuose, naked. Frond lanceolate, 5–6 in. long, $\frac{3}{4}$–1 in. broad, narrowed gradually to both ends, moderately firm in texture, glabrous, green, simply pinnate. Pinnæ about 30-jugate, crowded, broadly adnate at the base, linear, entire or very obscurely repand, the central ones $\frac{1}{2}$–$\frac{5}{8}$ in. long, $\frac{1}{12}$–$\frac{1}{8}$ in. broad. Veins simple, erecto-patent, 6–7 on each side of the midrib, not reaching the edge. Sori round, superficial, terminal on the veins, nearly or quite marginal.

Andrangaloaka, on trees. Very near *P. repandulum* and *deltodon*, but distinctly stipitate, with superficial marginal sori.

212*. P. (Eupolypodium) torulosum, *Baker*, n. sp. Stipes tufted, wiry, $\frac{1}{2}$–$\frac{3}{4}$ in. long, clothed with fine brown spreading hairs. Frond lanceolate, 3–4 in. long, 1–$1\frac{1}{2}$ in. broad, bipinnate, narrowed from the middle to both ends, moderately firm in texture, clothed with fine brown spreading hairs, which are most abundant on the rachis. Pinnæ narrow, linear, erecto-patent, 30–40-jugate, broadly adnate at the base, $\frac{1}{2}$ line broad, the upper and lower ones nearly entire, the rest with broad, obtuse, adnate lobes reaching nearly or quite to the midrib, which are almost truncate on the upper, and long, decurrent on the lower side. Veins immersed, simple, one running up each lobe. Sori round, superficial, one placed at the base of each lobe close to the midrib, 12–18 to the central pinnæ.

On a tree at Andrangaloaka. Allied to the rare Brazilian *P. achilleæfolium*, Kaulf.

18*. Notochlæna Streetiæ, *Baker*, n. sp. Stipe (incomplete) naked, castaneous, finely pilose, like the rachis. Frond deltoid, 3–4-pinnatifid, 5–6 in. long and broad, bright green, membranous; the veins ciliated with a few long hairs, the rest of the surface glabrous. Pinnæ few, the lowest pair much the largest, deltoid, distinctly petioled, 1½ in. broad, produced on the lower side, with bipinnatifid oblong-lanceolate lowest pinnules, which are much larger and more compound than any of the others. Ultimate lobes oblong, close, $\frac{1}{12}$–$\frac{1}{8}$ in. broad, reaching down about halfway to the midrib. Veins copiously pinnate in the ultimate lobes, with fine erecto-patent veinlets. Sori close or subremote, ½ line broad, round, with the margin not at all recurved.

Discovered by Mrs. Street. Habit and texture of the small forms of *Hypolepis Bergiana*.

GYMNOGRAMME LEPTOPHYLLA, *Desv.*

VITTARIA ELONGATA, *Sw.*

V. LINEATA, *Sw.*

ACROSTICHUM LATIFOLIUM, *Sw.*

A. LINEARE, *Fée.*

A. SQUAMOSUM, *Sw.*, var. LEUCOLEPIS, *Baker.* Lamina of the barren frond $\frac{3}{8}$–$\frac{3}{4}$ in. broad; both surfaces densely scaly. Scales white or pale brown, large, lanceolate, densely imbricated, ciliated only, not fimbriated; in one specimen $\frac{1}{8}$ in. long in the lower third of the frond and suddenly black in the lower half.

Probably a distinct species; but I have not seen the fertile frond.

A. SORBIFOLIUM, *Linn.*

PLATYCERIUM MADAGASCARIENSE, *Baker.* Miss Gilpin has brought the barren frond, which was wanting in Mr. Pool's collection. It is nearly a foot broad, obversely oblong, 6–8 inches from the border to the point of attachment, entire, glabrous, coriaceous. The large strong raised veins forming irregular pentagonal areolæ, the central ones 1–1½ in. long, the outer ones growing gradually smaller.

SCHIZÆA DICHOTOMA, *Sw.*

MOHRIA CAFFRORUM, *Desv.*

LYCOPODIUM DICHOTOMUM, *Sw.* Exactly matching Brazilian specimens. New to the Old World.

L. CERNUUM, *L.*

LYCOPODIUM CLAVATUM, *L.*

SELAGINELLA MOLLICEPS, *Spring.*

S. LYALLI, *Spring.*

Amongst the few flowering plants of the collection are included female spikes of *Hydrostachys Goudotiana*, of which the inflorescence was previously unknown. The flowers form dense spikes 1–1½ in. long, ⅙ in. thick; and the oblong coriaceous bract is verrucose at the top and wrapped tightly round the capsule. There is also a new *Asparagus*, of which I give a description:—

ASPARAGUS MADAGASCARIENSIS, *Baker*, n. sp. A much-branched climber, with slender, bright green, glabrous branches, the ultimate ramuli subpatent, and growing gradually shorter towards the top of the branch. Leaves obscurely calcarate. Phyllocladia usually in threes, at the top of the branch, rarely solitary, flat, lanceolate, bright green, glabrous, cuspidate, 3–4 lines long, erecto-patent, with a very distinct midrib. Pedicels axillary, geminate, articulated at the middle, finally ¼ in. long. Flower not seen. Berry the size of a large pea. Of known species, approaching only *A. scandens*, Thunb., of the Cape.

ANGRÆCUM GILPINÆ. "Aphyllum (anthesi quidem), caulescens, radicibus tenuibus elongatis subcompressis (?) multiflexis, pedunculo apice racemoso, bracteis ovato-triangulis reflexis minutis, ovariis longipedicellatis, sepalis tepalisque ellipticis obtuse acutis, labelli lamina cochleari calceolari obtuse acuta, calcari sigmoideo obtuso ovarium pedicellatum non æquante, rostelli falcibus elongatis ascendentibus.

"A highly curious plant, with minute flowers, yellowish when dry, scarcely exceeding ⅓ inch. It is most curious for the rostellum, that points to the existence of a remarkable insect for its fertilization. It is most respectfully dedicated to its discoverer."
—*Reich. fil. & S. Moore.*

Note on the Causes of the Numerical Increase of Parts of Plants.

By the Rev. GEORGE HENSLOW, M.A., F.L.S., F.G.S.

[Read June 7, 1877].

IN the following note I have attempted to classify the various methods and causes of the increase of parts of leaves and floral whorls, more especially with the view of limiting each of the various kinds to its proper cause respectively.

I. ATAVISM OR REVERSION.

1. *Dialysis* of normally "coherent" organs.
    - i. Of those coherent by organic union.
    - ii. Of those coherent by mechanical union.
2. *Solution* of normally "adherent" organs.

II. HYPERTROPHY.

1. *Polyphylly* :—
    - i. by the increase in number of individual parts, either of some or all those of a whorl.
    - ii. by the "symmetrical increase" of whorls.
    - iii. Restoration to a higher ancestral number.
2. *Pleiotaxy* :—
    - i. By the increase of the number of whorls.
    - ii. By the increase of the number of cycles.
3. *Pleiophylly* by the production of supernumerary leaflets.
    - i. Accidental numerical increase.
    - ii. Partial or entire restoration.

III. SUPPLEMENTAL DEVELOPMENTS.

1. *Plication.*
3. *Enation,* producing appendicular processes.

IV. [Cause obscure.]

Chorisis, fission, or *bifurcation.*

i. of axes. ii. of axial appendages.

V. ATROPHY.

Formation of compound foliar organs.

I. ATAVISM.—Under this head I would include *Dialysis* and *Solution* (Veg. Ter. Masters, pp. 69 & 76). For, I assume, on the well-known principles of evolution, that all normally coherent organs were originally free and distinct in their *ancestral* conditions; so that whenever normally united parts are developed free from each other, such I consider to be due to reversion in the sense of atavism.

Of cohesion I would recognize two kinds :—

- i. *Organic,* when the parts emerge from the axis already coherent, as do gamopetalous corollas.
- ii. *Mechanical,* when the parts are at first quite free, but unite subsequently by their adjacent edges, becoming coherent; as do the anthers of the *Compositæ* (by mucilage) and the stigmas of *Asclepias.*

Of examples of *dialysis* may be mentioned polypetalous *Cam-*

panula, *Convolvulus*, *Primula*, &c., as well as apocarpous pistils in flowers which are normally syncarpous.

As examples of *solution* are polysepalous and inferior calyces of apples and Umbelliferous plants associated with hypogynous petals and stamens.

The immediate cause of the solution in these cases is the arrest of development of the receptacular tube, in consequence of which the ovary remains superior and the calyx free.

II. HYPERTROPHY.—As effects of a superabundance of nourishment which must be expended in the development of supernume- organs, I would class :—

1. *Polyphylly* (*l. c.* p. 358); and of this phenomenon two varieties may be recognized.
   - i. The increase in number of some of or all the individual organs of a whorl.
   - ii. The "symmetrical increase" of whorls.
2. Restoration to a higher ancestral number.

First, any single organ may be doubled, trebled, or replaced by several. Thus two stamens often arise from the same gland in the place of one lateral stamen of a cruciferous flower. A similar phenomenon appears to occur normally in *Butomus*.

Secondly, of what I call the symmetrical increase of whorls, there are innumerable examples. In fact, any flower, say normally n-merous, seems capable of becoming $n+1$-, $n+2$-, $n+$&c.-merous; Elder, Jasmine, Fuchsia, &c. may be mentioned.

Thirdly, as partial or entire restorations to an ancestral number, which is normally reduced, are leguminous flowers with two to five carpels. Poppies with three sepals and six petals are, as I believe, *reversions* to an ancestral trimerous arrangement.

The development of the stamens of *Hypericum* would seem to show that the terminal staminal papillæ are themselves early arrested, but give rise to a cluster of smaller lateral papillæ, each of which becomes a perfect stamen.

3. *Pleiotaxy* (*l. c.* p. 371), This term applies to an increase :—
   - i. In the number of whorls.
   - ii. In the number of cycles.

Examples of increase of whorls is seen in the multiplication of the bracts of the Wheatear Carnation, in the perianth of the double White Lily, in double Campanulas, &c., and in Stonecrops with an extra staminal whorl. I would include here the double Daffodil, the successive whorls of which undergo partial adhesion as well as partial dialysis at the same time.

Secondly, when flowers become double they may lose their verticillate character and become spiral. Thus, I counted more than forty petals in a double Wallflower.

4. *Pleiophylly.*—As in the case of polyphylly, the abnormal increase of the number of leaflets of foliar appendages may be either due to an accidental numerical excess, or to atavism, one or more leaflets being usually suppressed. Thus, compound leaves occasionally develop extra leaflets, as the 4–7-leafed Shamrock (*Trifolium repens*); so also does *Oxalis*, *Laburnum*, &c.; while the Willow called *Salix pendula multistipulata* develops several stipules. Such abnormal varieties may become permanent.

Some leaves, however, such as of the Elm, occasionally produce a supernumerary leaflet at the base of the blade (*l. c.* p. 353, fig. 183). This is a *restoration*; for the leaf is normally oblique in consequence of the arrest of development of the lowermost fibro-vascular bundle on one side. If this be restored it produces a small leaflet occupying the space usually left vacant. A still further excess of development blends the leaflet into the main portion, and the leaf becomes simple and no longer oblique*.

III. SUPPLEMENTAL DEVELOPMENTS.—Under this head I would include all processes of *enation* (*l. c.* p. 443)—that is, outgrowths from organs *after* they have emerged from the receptacle or axis; such are spurs to corollas, which arise as saccate bulgings which become prolonged into spurs. Some forms of such processes, however, are not thus formed by the entire structure, but only by a *fold* in one epidermis. To such I apply the word *plication*. The rudimentary form may be seen in the "corona" of Forget-me-not, in *Primula*, and, in a more exaggerated condition, in that of *Narcissus*. In the latter example fibro-vascular bundles pass up the innermost and outermost membranes, but none occur on the outer epidermis of the corona, or on the inner or upper epidermis of the perianth-leaf.

IV. CHORISIS, FISSION, or BIFURCATION.—The causes of bifurcation are not clear. In some monstrous instances it may be simply due to injury at the apex of the organ. It may occur in axes, as when two cones or catkins take the place of one, or when the stems of ferns and the roots of *Lycopodium* bifurcate. Again it is frequent in foliar organs—as, abnormally in the fronds of *Scolopendrium*, or normally in the stamens of *Tilia*, *Malva*, and some of the *Amentaceæ*, and apparently also in *Adoxa*. In these andrœcia the anther-lobes are separated by "fission," which is carried down more or less towards the base of the filament, and are unilocular.

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* The cause of the obliquity of the Elm, Lime, &c., is, I believe, due to peculiar vernation, as I have elsewhere stated (Linn. Trans. vol. i. part 2, p. 37, sec. ser.). The stipules lie obliquely across the edges of the conduplicate leaf, and thus allow *one side* to develop more readily than the other.

The words "chorisis" and "fission" are inappropriate; for they express only the appearance, and not the real developmental process, as the stamens are not at first entire and then subsequently split; and I would, were it possible, use only "bifurcation," which simply describes the condition. Moreover, if chorisis be retained, I would limit its use to bifurcation alone.

Whenever supernumerary anthers are two-celled, such a stamen would not come under chorisis but hypertrophy, as in the case of *Hypericum*.

V. Atrophy.—To this cause I attribute all incised, cut, or laciniated foliar organs, and thence also compound leaves, which represent further conditions arrived at by the total arrest of the parenchymatous tissue between the fibro-vascular bundles. Several plants furnish transitional conditions which clearly prove this, as *Rubus fruticosus*, species of *Clematis*, *Rhus heterophylla*, &c.

The development of a lobed organ may easily give rise to a false conception; for the lobes begin as lateral outgrowths, and might be considered due to hypertrophy and not atrophy; but in normally lobed or compound leaves lateral protuberances would not occur at all if the intermediate tissue kept pace with them, as is the case with entire leaves.

Lastly, two or more of the preceding causes may act conjointly on a flower, inducing various modifications. Such is the case with a monstrous *Primula vulgaris* communicated by Miss Dowson and described by Dr. Masters in his paper "On some Points in the Morphology of the Primulaceæ"[*], and which I have also examined. Thus:—

Corolla.—

1. By *atavism*, the five petals are nearly free.

2. By *chorisis*, the median fibro-vascular bundle bifurcates and thus increases the number of lobes to ten.

3. *Solution* has freed the corolla from the stamens, thereby disproving the theory that the corolla of *Primula* is an outgrowth from the andrœcium.

Stamens.—

1. The *solution* just mentioned separates them from the corolla.

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[*] Now in the press for the Society's 'Transactions.'

2. They are *transformed* into petals.

3. *Arrest* of lateral parenchyma between the branches of the veins causes several of the petaloid stamens to become laciniated.

4. *Change of sex* has occurred, by which the petaloid filament developed style and stigma; and the margins and even the midribs had become placentiferous and produced rudimentary ovules.

PISTIL.—This organ remained normal in all the flowers examined.

Contributions to the Botany of H.M.S. 'Challenger.'

XXXIX. The Lichens of the 'Challenger' Expedition (with a revision of those enumerated by Dr. J. Stirton in Linn. Journ. Bot. xiv. pp. 366–375). By the Rev. J. M. CROMBIE, F.L.S. &c.

[Read June 7, 1877.]

CAPE VERDE.

1. SCYTONEMA —— sp. ? [= *Gonionema velutinum**].

On rocks, Bird Island: very sparingly and sterile. (This is probably a new species, but is not sufficiently developed to be fully described).

2. COLLEMOPSIS PELIA (*Strn.*), sp. n.?

On rocks: sparingly gathered. (There are no apothecia visible on the two fragments returned, so that the species is uncertain.)

3. ROCCELLA TINCTORIA, *DC.*

On rocks: fertile. [N.B. There are also smaller and more slender states from Bird Island, = *R. patellata*, Strn., sp. n.]

4. RAMALINA RIGIDA (*Pers.*) [= *R. scopulorum*, var. *tenuior*, Strn.].

On the ground: sterile.

5. R. CUSPIDATA, var. CRASSA, *Del.* [= *R. polymorpha*].

On maritime rocks: fertile and somewhat variable.

6. R. INTERMEDIA, *Del.* [= *R. farinacea*].

On the ground: sterile.

7. PARMELIA TINCTORUM, *Despr.* [= *P. tiliacea*, var. *scortea*].

On rocks: barren.

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* In this and the following instances I give Dr. Stirton's determinations within brackets.

8. PARMELIA PERFORATA, *Ach.* [=*P. conspersa*].

On rocks: sterile. (There is no specimen present of *P. lævigata*, enumerated by Dr. Stirton.)

9. PHYSCIA FLAVICANS (*Sw.*) [=*Alectoria epichrysa*, Strn., sp. n.].

On the ground: sterile.

10. P. LEUCOMELA (*L.*) [=*Alectoria sulcata*].

On the ground: sterile, mixed up with *P. flavicans*.

11. P. ADSCENSIONIS (*Ach. Syn.* p. 179).

On rocks: sterile, associated with *Scytonema*.

12. HEPPIA MEIOLEPIS, *Cromb.* [=*Endocarpiscum aterrimum*, Strn, sp. n., nomen ineptum, nam nihil atrum habet thallus]. Thallus obscure olivaceo-fuscus, squamulosus, squamulis sat tenuibus (latit. circiter 0·5 millim.), planiusculis, vel fertilibus convexiusculis, subsparsis; apothecia incoloria endocarpoidea (visa solum epithecio punctiformi, juniora); thecæ polysporæ turgidæ; sporæ incolores breviter ellipsoideæ, longit. 0·003–0·004 millim., crassit. 0·0020–0 0025 millim.; paraphyses gracilescentes. Iodo gelatina hymenialis cærulescens, dein vinoso-fulvescens.

On rocks: sparingly seen.

13. LECANORA (PLACODIUM) LEPIDOPLACUM, *Nyl.*, sp. n. [=*Placodium elegans*]. "Affinis *Placodio murorum*, sed thallo (vitellino-aurantiaco) deplanato squamuloso-adnato, squamulis ambitu lobulato-incisis. Apothecia saturatiora (latit. circiter 0·5 millim.), margine thallino integro cincta; sporæ longit. 0·008–0·0011 millim., crassit. 0·005–0·007 millim. Spermatia longit. 0·0025–0·0030 millim., crassit. 0·0007 millim.

Comparandum *Placodium subsolutum*, Nyl. (Pyr. Or. p. 50), mox differt squamulis thalli minus evolutis et sporis majoribus." —*Nyl. in litt.*

On rocks: sparingly associated with the preceding species.

14. L. (PLACODIUM) FLAVORUBENS, *Nyl.*

On rocks: apparently frequent.

15. L. PYRACEA (*Ach.*).

On rocks: very sparingly (*fide* Dr. Stirton).

16. L. VINCENTINA, *Nyl.*, sp. n. [=*L. subfusca*, var. *atrynea*]. "Thallus albidus tenuis areolato-rimulosus (K+flavescens); apothecia pallida opaca (latit. circiter 0·5 millim.), margine sat tenui integro cincta; sporæ 8næ, ellipsoideæ, longit. 0·009–0·011 millim.,

crassit. 0·004–0·006 millim.; paraphyses graciles apice granuloso-inspersæ. Iodo gelatina hymenialis cærulescens, cærulescentia dein subpersistens (thecæ sæpe subviolascentes).

"Affinis videtur *Lecanoræ subcarneæ*, Nyl. A *L. Bogotana* pallidiore distat paraphysibus gracilentis. Spermogonia non visa." —*Nyl. in litt.*

On rocks, St. Vincent: very sparingly seen.

17. DIRINA REPANDA, var. [=*Lecidea teichiodes*, Strn., sp. n.].

On rocks, the only specimen seen being sterile. This is certainly not a *Lecidea*, but a *Dirina*, as is sufficiently shown by the characters of the thallus and the spermogones. It appears to be a var. of *D. repanda*, approaching to *schistosa*, Bagl. (vid. Nyl. Pyr. Or.); but as no apothecia are visible on the specimen returned, this is somewhat uncertain.

18. PERTUSARIA ALEIANTA, *Nyl.*, sp. n. [=*P. leioplaca*]. "Thallus albidus opacus, mediocris crassitiei (1 millimetri vel multo quidem tenuior), inæqualis, rimoso-diffractus K(CaCl) –; apothecia (in verrucis thallinis convexis inæqualibus variisque, 1–3-hymeneis inclusa) extus supra puncto obscuro ostioli demum indicata K(CaCl) –; sporæ 2–4næ, longit. 0·070–0·090 millim., crassit. 0·033–0·038 millim. Iodo thecæ intensive cærulescentes. Verrucæ thallinæ apothecia continentes plus minusve eminulæ et distinctæ, interdum subconfluentes. Spermatia acicularia recta longit. 0·010–0·012 millim., crassit. 0·0005 millim., utroque apice acutata.

"Comparetur *P. impallescens*, Nyl., ex insula Rodriguez."—*Nyl. in litt.*

On rocks: sparingly seen.

19. LECIDEA CANESCENS (*Dcks.*).

On rocks: sterile, associated with *Collemopsis pelia*. (Thallus K+ yellowish, CaCl –.)

20. L. EPIPASTA, *Strn.*, sp. n. (Nomen valde ineptum, nam nihil "effusum" adest: melius forte dicatur *L. epiplacodia*, Cromb.)

On rocks: parasitic on the thallus of *Lecanora flavorubens*.

(This species is in a certain way allied to *L. parasitica*; but the spores are colourless, normally 3-septate, 0·018–0·022 millim. long, 0·0035 millim. thick; and, what is of greater importance, the spermatia are arcuate as in the section of *L. aromatica*, to which consequently it belongs. It is there analogous to *Lecidea vitellinaria* in the section of *L. parasema*.)

21. LECIDEA THYRSODES, *Strn.*, sp. n. (As the diagnosis given by Dr. Stirton of this species does not agree with the plant so named on the fragmentary specimen, I have named this latter as follows.)

L. HETEROBOLA, *Cromb.*, sp. n. Thallus albidus tenuis vel tenuissimus continuus rugulosus, subrimulosus; apothecia nigra prominula submarginata (latit. circiter 0·5 millim.), intus strato medio albido; sporæ 8næ incolores bacillares 7-septatæ, longit. 0·048–0·078 millim., crassit. 0·002–0·003 millim.; paraphyses gracilescentes, bene discretæ, epithecium fuscescens, hypothecium cum perithecio fuscum. Iodo gelatina hymenialis vix tincta, thecæ dilute rosello-violascentes.

Accedere videtur sporis suis ad stirpem *Lecideæ bacilliferæ*, sed esse possit stirpis propriæ distinctæ.

On rocks: very sparingly seen.

22. L. MYRIOCARPA, *DC.*

On rocks: a small fragment.

23. OPEGRAPHA UNDULATA, *Strn.*, sp. n. (Nihil autem "undulatum" habet. Dicatur *O. dialeuca*, Cromb.)

On rocks: very sparingly seen. Spores constantly 7-septate 0·023–0·027 millim. long, 0·006–0·007 millim. thick; hypothecium colourless; perithecium black. A very distinct species of the genus, differing in various respects from *O. albo-atra*, Nyl. Enum. Gen. p. 131, which also, *ex* hb. Hooker, occurs in Cape Verde.

BERMUDA.

1. LEPTOGIUM DIAPHANUM (*Sw.*), *Ach.* [=*L. tremelloides*, var. *mesotomum*, Strn.].

On the bark of trees.

2. L. TREMELLOIDES, *Ach.* [=*L. marginellum*].

On the bark of trees: fertile and quite typical.

3. CLADONIA ACUMINATA, *HEBESCENS, *Nyl.* "Differt a *C. acuminata* (Ach.) squamulis crassiusculis subconvexulis. Sterilis modo visa. Forsan propria species."—*Nyl. in litt.*

On the ground: very sparingly seen.

4. C. FIBULA (*Ach.*) [=*C. turgida*, et var. *elegans*].

On the ground: fertile.

5. C. MITRULA, *Tuck.* [=*C. botrytes*].

On the ground: fertile.

6. Ramalina complanata (*Sw.*), *Ach.* [= *R. bermudiana*, Strn., sp. n.].

On branches of trees: fertile. (This of course bears no resemblance whatever to *Physcia chrysophthalma.*)

7. Parmelia tinctorum, *Despr.* [= *P. tiliacea*, var. *scortea*].

On putrid trunks: sterile.

8. P. perlata (*L.*) [= *P. physodes*, var. *labrosa*].

On old wood: infertile. (The specimen is very much sorediate at the margins of the lobes.)

9. Physcia Leana, *Tuck.* [= *P. speciosa*].

On bark of trees, very sparingly. (Thallus K –. The specimen is somewhat smaller than the original muscicole plant from Ohio.)

10. P. obsessa (*Mnt.*), *Nyl. Syn.* p. 426 [= *P. stellaris*].

On thin bark, very sparingly.

11. Lecanora subfusca, * sylvestris, *Nyl. in Mand. Lich. Mader.* No. 1.

On thin bark, very sparingly, associated with the preceding species. (Spores 0·008–0·011 millim. long, 0·004–0·007 millim. thick.)

12. L. Bermudensis, *Nyl.* [= *L. subfusca*, var. *argentata*]. "Affinis *L. umbrinæ*, sed mox differens, margine thallino apotheciorum integro, paraphysibus gracilescentibus, &c. Thallus K –."—*Nyl. in litt.*

On bark of trees: only a fragment seen.

13. L. chlaronella, *Nyl.* [= *L. varia*, var. *symmicta*]. "Similis *L. chlaroterodi*, Nyl. in Flora, 1876, p. 508, Cubanæ, sed differt gelatina hymenialis iodo vinose fulvescente (præcedente cærulescentia). Spermogonia non visa."—*Nyl. in litt.*

On bark of trees: a very small specimen only seen.

14. L. glaucomodes, *Nyl. in Flora*, 1876, p. 509, * conflectens, *Nyl.* [= *L. angulosa*, var. *albo-pruinosa*, Strn.]. "Differt, *L. conflectens* a *glaucomodi*, paraphysibus distinctis, iodo gelatina hymeniali vinose fulvescente, etc."—*Nyl. in litt.*

On the bark of trees: very sparingly.

15. Pertusaria papillata (*Ach.*), *Nyl.* [= *P. leioplaca*].

On the bark of trees: a mere fragment.

16. Pertusaria pustulata (*Ach.* [=*P. melaleuca*].

On the bark of trees: sparingly seen.

17. Lecidea fuscorubescens, *Nyl.*, *L. Andaman*, p. 10 [=*L. caliginosa*, Strn., sp. n.].

On the bark of trees: sparingly seen.

N.B. "*Lecidea fuscorubescens*, Nyl. Port Natal, p. 8, is to be separated from the present species on account of its larger and more turgid spores (0·011–0·017 millim. long, 0·007–0·010 millim. thick), and to be called *Lecidea Natalensis*, Nyl."—*Nyl. in litt.*

[L. euporiza, *Strn.*, sp. n.]

On the specimen returned there is nothing rightly developed, and nothing at all lecideine. It seems rather to be something of a mycological nature.

18. L. semiusta, *Strn.*, sp. n.

On rocks: very fragmentary.

(This belongs to the section of *L. trachona*, Flot., and, indeed, may be merely a state of that species; but the fragment, on which only two apothecia are visible, is scarcely determinable. Spores 0·009–0·011 millim. long, 0·003 millim. thick.)

19. L. revertens, *Strn.*, sp. n.

On calcareous rocks: a mere fragment.

(This species is apparently closely allied to *L. misella*. Spores 0·006–0·008 millim. long, 0·002–0·003 millim. thick.)

20. L. insperata, *Nyl. N. Gran.* p. 31 [=*L. myriocarpa* (*DC.*) ex Strn. in Sched.].

On the bark of trees, associated with *Pertusaria pustulata*.

(Nylander observes *in litt.* that, notwithstanding the character of the spores, this species is rather a *Lecidea* than a *Lecanora*. Spores 0·012 0·018 millim. long, 0·005–0·008 millim. thick.)

21. Graphis Afzelii, *Ach.*

On bark of trees: well fruited.

22. G. (Lecanactis) lobata (*Eschw.*) [=*G. punctiformis*].

On the bark of trees, sparingly.

23. G. scripta, *Ach.* [=*G. nematodes*, Strn., sp. n.].

On branches: probably not uncommon.

24. Arthonia polymorphoides, *Nyl.*, sp. n. [=*A. interveniens*]. "Sat similis *A. polymorphæ*, Ach., sed mox differt gelatina hymeniali iodo persistenter cærulescente et sporis vinose rubescenti-

bus. Sporæ oblongæ 5-septatæ, longit. 0·016–0·023 millim., crassit. 0·006–0·007 millim. Spermatia arcuata, longit. 0·012–0·016 millim., crassit. 0·0005 millim."—*Nyl. in litt.*

25. ARTHONIA RUBELLA, *INFERIUSCULA, *Nyl.* [=*A. velata*, Strn., sp. n.]. "Differt ab *A. rubella* præsertim sporis nonnihil minoribus, 0·023–0·030 millim. long, 0·009–0·015 millim. thick."—*Nyl. in litt.*

On the bark of trees: very sparingly seen.

(N.B. The specific name *velata*, Strn., has long ago been given by Flotow to another species.)

26. VERRUCARIA RUDERELLA, *Nyl.*, sp. n. "Similis *V. ruderum*, sed sporis longe minoribus, longit. 0·014–0·019 millim., crassit. 0·009–0·012 millim."—*Nyl. in litt.*

On calcareous rocks, very sparingly, associated with *Lecidea semiusta.*

27. ENDOCOCCUS THALAMITA, *Nyl.*, sp. n. "Pyrenia habet incoloria vel dilute fuscescentia immersa (latit. circiter 0·1 millim., vel minora) in thalamio *Lecideæ insperatæ*; thecæ polysporæ; sporæ fuscæ ellipsoideæ leviter 1-septatæ, longit. 0·007–0·010 millim., crassit. 0·003–0·004 millim. Iodo gelatina hymenialis vinose rubescens. Apothecia parasita occupata sine paraphysibus, thecis, etc."—*Nyl. in litt.*

On the bark of trees, sparingly, associated with *Pertusaria pustulata*, Ach.

28. TRYPETHELIUM CRUENTUM (*Mnt.*).

On branches: probably not uncommon.

AZORES (FURNAS).

1. CLADONIA FIMBRIATA, *Hffm.* [=*C. pyxidata*, var.].

On rocks: sterile.

2. C. SOBOLIFERA (*Del.*), *Nyl.* [=*C. squamosa*].

On the ground: sterile and but little evolute.

3. ROCCELLA PHYCOPSIS, *Ach.*

On rocks? barren.

4. STICTA PULMONACEA, *Ach.*

On trees: infertile.

5. S. DAMÆCORNIS (*Sw.*).

On trees: fertile.

6. PARMELIA PERLATA (*L.*).

On trees: sterile. (One specimen also occurs labelled *P. conspersa.*)

7. P. PERFORATA (*Wulf.*).

On bark: infertile and small.

8. LECIDEA ENDOLEUCA, *Nyl.* [=*L. cyanochroa*, Strn., sp. n.].

On bark: very sparingly seen. (The plant is entirely similar to the European. Spores, 0·045–0·055 millim. long, 0·0035 millim. thick; paraphyses *blackish* at the apices; hypothecium beneath purplish brown or subcolourless.

TENERIFFE.

1. RAMALINA MINUSCULA, *Nyl.* [=*R. aulota*, Strn., sp. n.].

On rocks: fertile. (Spores 0·010–0·015 millim. long, 0·004–0·006 millim. thick.)

2. STICTA AURATA, *Ach.*

On trees: sterile. (A state with the thallus somewhat paler than usual, but otherwise not at all like var. *pallens*, Nyl.)

3. PARMELIA GLABRA (*Schaer.*), *Nyl.* [=*P. olivacea*, var. *stygia*].

On rocks: fertile. Thallus CaCl ∓.

4. LECANORA (SQUAMARIA) SAXICOLA (*Poll.*).

On rocks: a small specimen.

5. L. (SQUAMARIA) MELANOPHTHALMA (*Ram.*).

On rocks: fragmentary specimens.

6. L. (PLACODIUM) SUBELEGANS, *Nyl.*, sp. n. [=*P. murorum*, var. *miniatum*]. "Subsimilis *P. eleganti*, sed mox differens sporis majoribus vel turgidioribus (longit. 0·010–0·015 millim., crassit. 0·007–0·009 millim.). Spermatia oblonga, longit. 0·025–0·030 millim., crassit. 0·0010 millim."—*Nyl. in litt.*

On rocks, very sparingly.

7. L. PARELLA, *Ach.* [=*L. pallescens*].

On rocks: quite typical.

8. L. TENERIFFENSIS, *Nyl.* [=*L. noseriza*, Strn., nomen informe]. "Thallus e granulis albis minutis (K−) constans, sparsis in hypothallo nigro maculiformi; apothecia dilute luteo-pallida (latit. 0·5 millim. vel minora), margine thallino subcrenato cincta; sporæ 4–8næ incolores ellipsoideæ, longit. 0·011–0·014 millim., crassit. 0·07–0·010 millim.; paraphyses gracilescentes, superius et epithe-

cium granuloso-inspersa. Iodo gelatina hymenialis bene cærulescens, dein thecæ violaceo-fulvescentes.

Species peculiaris comparanda cum *L. Bermudensi*, sed mox differens thallo alio, margine thallino apotheciorum subcrenato-inæquali, etc. Spermogonia non visa."—*Nyl. in litt.*

On bark of trees: only a small fragment seen. (This species evidently has nothing in common with *L. varia.*)

9. URCEOLARIA SCRUPOSA * BRYOPHILA, *Ach.* [=*U. scruposa*].

On the ground, along with the barren thallus of *Cladonia pyxidata.*

10. LECIDEA GEOGRAPHICA (*L.*).

On rocks, associated with *L. saxicola.*

11. L. ? ATROBRUNNEA (*DC.*).

On rocks: sterile and doubtful.

FERNANDO DE NORONHA.

1. LECANORA RECUBANS, *Strn.*

On rocks; well fruited. (This species is allied to *Lecanora bella*, Ach.).

BAHIA.

1. LEPTOGIUM TREMELLOIDES (*Ach.*).

On trees? sparingly fertile.

2. PARMELIA PERSULPHURATA, *Nyl.* "Subsimilis *Parmeliæ sulphuratæ*, Nees et Flot., Nyl. Syn. p. 377, sed nonnihil minor, thallo vix isidiosulo, subsoredioso, intus sulphureo-aureo, marginibus lobulorum passim crenulato-incisis. Apothecia et spermogonia ignota. Thallus K$\underline{+}$." *Nyl. in litt.*

On the bark of trees; only a small fragment seen. Formerly gathered in Louisiana, *Tuck.*, who does not distinguish it from *P. sulphurata.*

Along with this is the merest fragment of another *Parmelia*, which externally resembles states of *P. tinctorum*, Despr., but differs from this and all other known species by its peculiar reaction, viz. "Medulla and soredia K+, greenish black." The fragment, however, is too miserable to admit of any right diagnosis, though its unique reaction will render its identification an easy matter. I purpose naming it *P. adepta*, Cromb., n. sp.

3. GRAPHIS AFZELII (*Ach.*).

On bark of trees, very sparingly.

4. GRAPHIS TENELLA, *Ach.*, *Nyl. N. Granat.* p. 561.

On bark of trees, very sparingly.

5. GLYPHIS CICATRICOSA, f. FAVULOSA (*Ach.*), *Nyl. N. Granat.* p. 208.

On bark of trees; only a small fragment seen. (The spores are 0·030 millim. long. 0·009 millim. thick).

6. CHIODECTON RUBROCINCTUM (*Ehrnb.*), *Nyl. N. Granat.* p. 110.

On bark; sparingly seen.

7. VERRUCARIA CINCHONÆ, *Ach.* (=*V. prostans* Mut., Nyl. Pyrenoc. p. 57).

On smooth bark, very sparingly.

8. MELANOTHECA ACICULIFERA, *Nyl.*

On branches of trees, sparingly, and with the spores rarely well evolute.

KERGUELEN'S LAND.

1. STEREOCAULON CYMOSUM, *Cromb.*

On the ground; infertile.

2. CLADONIA CORNUTA (*L.*), *Fr.*

On the ground; barren.

3. NEUROPOGON MELAXANTHUS, var. CILIATA, *Nyl.*

On rocks; fertile. (A somewhat deformed and otherwise not typical state.)

4. N. TAYLORI (*Hook. fil.*).

On rocks; large and fertile specimens.

5. PANNARIA DICHROA (*Tayl.*).

On rocks; sparingly gathered.

6. LECANORA (PLACOPSIS) GELIDA (*L.*), ff. LATERITIA, *Nyl.*, et VITELLINA, *Bab.*

On rocks, sparingly; fertile.

7. L. (PLACOPSIS) MACROPHTHALMA (*Tayl.*).

On rocks; fertile.

8. L. CYPHELLIFORMIS, *Cromb.*, sp. n. Affinis *Lecanoræ jungermanniæ* (Vahl), sed thallo vix ullo, apotheciis biatorinis luteis concaviusculis marginatis (latit. 0·5 millim. vel minoribus): sporæ placodinæ solitæ, longit. 0·015–0·018 millim., crassit. 0·008–0·010 millim.

On decayed plants; only a very few apothecia visible.

9. LECIDEA DISJUNGENDA, *Cromb. in Journ. Bot.* 1877.

10. L. STEPHANODES, *Strn.*, sp. n. Thallus albidus vel cinerascens (vel ferro tinctus ochraceus, f. *ferruginea*), tenuis, subrugulosus, continuus: apothecia nigra superficialia (latit. circiter 1 millim.), plana, crasse marginata margine obsolete radiatim rimoso-subdiffracto; sporæ 2–8næ incolores ellipsoideæ simplices, longit. 0·038–0·056 millim., crassit. 0·021–0·034 millim., paraphyses discretæ graciles, epithecium fuscescens, hypothecium cum perithecio crasse nigrum. Iodo gelatina hymenialis intensive cærulescens.

This is a very well-marked species with large spores, belonging to the section of *L. contigua*.

On rocks; only a fragmentary specimen seen.

11. L. SUPERJECTA, *Nyl.*, sp. n. "Parasita, apotheciis nigris superficialibus corrugato-plicatis (latit. 0·5 millim. vel minoribus), intus concoloribus: sporæ 8næ incolores ellipsoideæ simplices, longit. 0·009–0·011 millim., crassit. 0·006 millim.; epithecium angustum subincolor, paraphyses gracilescentes, hypothecium cum perithecio (etiam implicato) nigro. Iodo gelatina hymenialis cærulescens, dein vinose rubens." *Nyl. in litt.*

Parasitic on the thallus of *L. disjungenda*; only a very few apothecia seen.

12. L. GEOGRAPHICA (*L.*).

On rocks, associated with other lichens.

13. VERRUCARIA ÆTHIOBOLA, *Ach.*

On rocks, very sparingly, along with *L. subjungenda*.

14. V. CONGESTULA, *Strn.*, sp. n. Apothecia nigra rugosa coarcervato-congesta, pyrenio integre nigro (latit. fere 0·7 millim.); sporæ 8næ, demum infuscatæ, breviter ellipsoideæ, submuralidivisæ, longit. 0·021–0·025 millim., crassit. 0·016–0·018 millim.; thecæ cylindraceæ, paraphyses parcæ mollissimæ. Iodo gelatina hymenialis non tincta, thecæ autem demum vinose fulvescentes.

Parasitic on the thallus of *Lecanora macrophthalma*; but probably only a *Sphæria*.

On rocks; very sparingly seen.

MARION ISLAND.

1. STEREOCAULON —— ?

On the ground; a mere fragment, indeterminable.

2. Cladonia fimbriata, f. costata, *Flk.*
On the ground: very sparingly fertile.

3. Neuropogon melaxanthus (*Ach.*).
On rocks: barren.

4. Peltigera polydactyla, f. hymenina (*Ach.*).
Amongst mosses on the ground: fertile.

5. Cœnogonium confervoides, *Nyl.*
Amongst mosses, &c.: sterile.

Inaccessible Island.

1. Ramalina Yemenensis, *Ach.*
On branches of trees: fertile.

2. R. intermedia (*Del.*).
On the branches of trees: barren.

3. Parmelia perforata, *Ach.*
On trees: sterile, fragmentary and uncertain.

4. Lecanora subfusca, var. subgranulata, *Nyl. L. Antill. Husn.* p. 11.
On the bark of trees: apparently common.

Island of Tristan d'Acunha.

1. Stereocaulon mixtum, *Nyl.*
On the ground: sterile.

2. Stictina intricata, f. Thouarsii (*Del.*).
On trees: with young apothecia.

3. Parmelia perforata, *Ach.*
On trees: infertile.

4. P. perlata (*L.*).
On trees: barren, also a sorediate state.

5. P. revolutella, *Nyl.*, sp. n. "Est quasi *P. revoluta*, Flk., minor, thallo albido imbricato-laciniato (laciniis latit. 1–2 millimetrorum, subtus nigris, passim rhizinis concoloribus sparsis parcisque); medulla CaCl +. Apothecia non visa. Spermatia bifusiformia, longit. 0·004–0·006 millim., crassit. 0·0005 millim." *Nyl. in litt.*
On trees? very sparingly seen.

6. Lecanora (Placopsis) gelida (*L.*).
On rock: probably frequent.

7. L. Acunhana, *Nyl.*, sp. n. "Thallus albidus tenuis ruguloso-

inæqualis continuus, passim rimosus (K—, I—); apothecia nigra adnata plana (latit. 0·5–0·8 millim.), marginata, parum prominula; sporæ 8næ, fuscæ, ellipsoideæ, 1-septatæ, longit. 0·010–0·012 millim., crassit. 0·006–0·007 millim.; paraphyses fere mediocres clava fusca apice incrassatæ; hypothecium fuscum. Iodo gelatina hymenialis intensive cærulescens.

"Species bene distincta videtur in stirpe *Lecideæ dispersæ* (Mass.). Spermatia oblongo-cylindrica, longit. 0·003 millim., crassit. 0·001 millim." *Nyl. in litt.*

On rocks: very sparingly seen.

ISLAND OF JUAN FERNANDEZ.

1. LEPTOGIUM AZUREUM (*Sw.*), *Ach.*

On trunks of trees: fertile.

2. BÆOMYCES CHILENSIS (*Mnt.*), *Nyl.*

On the ground: fertile. (This, in all probability, is to be regarded as a proper species, distinguished by the thin, whitish, rugulose, continuous thallus).

3. STEREOCAULON RAMULOSUM (*Ach.*), *Nyl.*

Apparently on the ground: a slender state, fertile.

4. CLADIA AGGREGATA (*Sw.*), *Nyl.*

On the ground: a young state, infertile.

5. STICTA SUBVARIABILIS, *Nyl. in Flora*, 1867, p. 439.

On mossy trunks of trees: infertile.

6. S. HYPOPSILA, *Mnt.*

On trees: sparingly fertile.

7. S. LINEARILOBA (*Mnt.*), *Nyl.*

On trees: very sparingly fertile.

8. THELOTREMA —— ?

On the bark of trees: indeterminable.

9. URCEOLARIA SCRUPOSA, *Ach.*

On the ground: the host of the following species.

10. LECIDEA FERNANDEZII, *Cromb.* Omnino est similis *L. Urceolariæ*, Nyl. in Flora, 1873, p. 298, Norrl. Fl. L. F. no. 193, differt autem hypothecio et perithecio fuscis, sporisque fere minoribus, longit. 0·010–0·014 millim., crassit. 0·004–0·006 millim. Forsan varietas *L. Urceolariæ.*

Parasitic on the thallus of *Urceolaria scruposa.*

SANDWICH ISLANDS.

1. USNEA MICROCARPA, *Pers. Uran.* p. 210; *vid. Nyl. Syn.* p. 267.

Apparently on rocks: well fruited. Haevai.

ISLAND OF TAHITI.

1. COLLEMA BYRSINUM, *Ach.*

On the trunks of trees: fertile.

2. LEPTOGIUM DIAPHANUM (*Sw.*), *Ach.*, *Mont.*

On trees: well fruited.

3. L. LACERATULUM, *Nyl.*, sp. n. "Subsimile *L. lacero*, sed thallo minus lævi et magis crispo, marginibus passim tenuiter denticulato-isidiosis vel tenuiter fibrilloso-laceris. Sterile modo visum. Fere *Stephanophoron* sit ob thallum plicatulo-rugulosum (tamen nonnihil minus quam in *L. corrugatulo* comparando)." *Nyl. in litt.*

Amongst mosses, on trees? infertile.

4. STEREOCAULON PROXIMUM, *Nyl.*

On the ground: fertile.

5. USNEA CERATINA, *Ach.*

On the trunks of trees: fertile.

6. U. TRULLIFERA, *Nyl.*, sp. n. "Differt ab *U. florida* (L.), thallo basi cortice transversim plicatulo, fibrillis ascendentibus (nec patentibus), apotheciis magnis receptaculo subefibrilloso (nec margine ciliato), sporis nonnihil minoribus, &c." *Nyl. in litt.*

On trunks of trees: fertile.

7. STICTINA CARPOLOMA (*Del*), *Nyl.*

On trees: sparingly fertile.

8. S. CAPERATA, *Bory*, *Nyl.*

On the trunks of trees: well fruited.

9. S. DICHOTOMOIDES, *Nyl.*, *Syn.* p. 355.

On trees: fertile. Alt. 4000 feet. (The specimen is not quite typical, but has the thallus smooth, and not scrobiculose).

10. PARMELIA LATISSIMA, *Fée.* (=*P. glaberrima*, Kphb. in Flora, 1869, p. 233). *Vid.* Nyl. Pyr. Or. p. 16, nota.

On trees? scarcely fertile, only a single young apothecium being visible on the specimen.

11. Physcia podocarpa (*Bel.*), *Nyl. in Flora*, 1869, p. 322.
On branches of trees: sparingly fertile.

12. P. podocarpoides, *Nyl.*, sp. n. "Subsimilis *P. podocarpæ*, sed thallo (similiter K $^{+}_{+}$ et medulla dein croceo-ferruginascente) subtus nigrescente, ciliis nigris (marginalibus vix ullis); apotheciis fusco-nigris nudis (in *podocarpa* cæsio-pruinosis); sporis fuscis 1-septatis (in utraque parte loculus major rotundatus et alter minutus apicalis), longit. 0·034–0·040 millim., crassit. 0·017–0·021 millim." *Nyl. in litt.*
On branches of trees: well fruited.

13. Pannaria rubiginosa (*Thunb.*).
On the bark of trees: fertile.

14. P. nigro-cincta (*Mont.*).
On branches of trees: a small specimen, but well fruited.

15. P. pannosa (*Sw.*), *Del.*
On trees: both fertile and sterile.

16. Pertusaria velata (*Turn.*).
On branches of trees: finely fruited.

17. Lecidea Taitensis, *Mnt.*
On trees: fertile. (This is most likely a *Lecanora*, though the apothecia have not always a thalline margin. Spores 4–8næ, 0·036–0·070 millim. long, 0·022–0·027 millim. thick.)

18. L. leucoblephara, *Nyl. N. Gran.* p. 52.
On branches: a small specimen.

19. L. leptocheiloides, *Nyl.*, sp. n. "Thallus albidus, minute granulato-inæqualis, tenuis: apothecia nigra plana marginata (latit. 1–2 millim. vel minora), perithecio extus albido, intus subnigra (strato excipulari albo): sporæ 8næ, incolores oblongæ 1-septatæ, longit. 0·016–0·019 millim., crassit. 0·005–0·006 millim.; epithecium cærulescenti-nigrum, paraphyses gracilescentes, hypothecium (superius et medium) fuscum (K violaceo-purpurascens). Iodo gelatina hymenialis vinose rubescens, præcedente cærulescentia.

"A *L. leptocheila*, Tuck. (*vid.* Nyl. *N. Gran.* p. 66, et *L. Antill.* p. 14; Wright, *L. Cub.* no. 227), mox differt hypothecio alio. Spermogonia non visa." *Nyl. in litt.*
On the thin bark of trees: only a single small specimen gathered.

20. Graphis assimilis, *Nyl.*
On branches: two fragmentary specimens seen.

21. GRAPHIS STRIATULA, *Ach.*

On bark: associated very sparingly with *Lecidea leucoblephara.*

ADMIRALTY ISLANDS.

1. COLLEMA (DICHODIUM) BYRSINUM (*Ach.*), *Nyl. L. Antill. Husn.* p. 4.

On trees: well fruited.

2. RAMALINA SUBFRAXINEA, *Nyl. Ramal.* p. 41.

On branches: fertile. (Spores 0·015–0·018 millim. long, 0·004–0·005 millim. thick.)

3. PYXINE ——?

On bark: sterile and indeterminable.

4. LECANORA GRANIFERA, var. LEUCOTROPA, *Nyl. L. Antill. Husn.* p. 11.

On the bark of trees: a small specimen. (Thallus K+, yellow; spores 0·014–0·016 millim. long, 0·007–0·010 millim. thick.)

5. OPEGRAPHA SUBVULGATA, *Nyl. in Flora*, 1869, p. 71.

F. *absita*, Nyl. "Differt apotheciis interdum cæsio suffusis, sporis nonnihil turgidioribus (longit. 0·023–0·032 millim., crassit. 0·006 millim., 7-septatulis). Thallus variat maculiformis pallescens aut fuscescens. Spermogonia non visa."—*Nyl. in litt.*

On branches: apparently frequent.

6. ARTHONIA POLYMORPHOIDES, *Nyl.*

On thin bark of trees: sparingly gathered. (Spores 0·016–0·022 millim. long, 0·006–0·007 millim. thick.)

7. PLATYGRAPHA STENOGRAMMA, *Nyl.*, sp. n. "Thallus albidus subopacus tenuis lævis, tenuiter nigro limitatus; apothecia nigra lineari-elongata (latit. circiter 0·15 millim., longit. sæpius 1–2 millim.), simplicia, plus minusve flexuosa, intus albida; sporæ 8næ aciculari-fusiformes 7–9 septatæ, longit. 0·030–0·035 millim., crassit. 0·004 millim., paraphyses irregulares graciles, hypothecium incolor. Iodo gelatina hymenialis dilute vinose rubescens.

Species apotheciis elongatis thallino-obductis (epithecio solo nudo) bene distincta, facie fere *Graphidis Pavonianæ*. Spermatia arcuata, longit. 0·018–0·023 millim., crassit. 0·0005 millim.

On the bark of trees: probably not uncommon.

8. GRAPHIS SCRIPTA, f. PULVERULENTA, *Ach.*

On the bark of trees: sufficiently typical.

9. G. DENDROGRAMMA, *Nyl.*, sp. n. "Affinis *G. scriptæ*, sed

apothecia cæsio-pruinosa longiora dendroideo-divisa, thallodeo-marginata; sporæ 8–10 loculares, longit. 0·020–0·030 millim., crassit. 0·006–0·007 millim."—*Nyl. in litt.*

On the bark of trees: very sparingly gathered.

10. VERRUCARIA PARAMERA, *Nyl.*, sp. n. "Thallus macula luteo-pallescente indicatus; apothecia pyrenio integre nigro, parte dimidia superiore nuda convexa prominula (latit. 0·5–0·7 millim.); sporæ 8næ, fuscæ vel fuscescentes, ellipsoideæ vel oblongo-ellipsoideæ, 6-loculares vel demum loculis quibusdam transversim divisis (ita duplicatis), longit. 0·024–0·034 millim., crassit. 0·010–0·015 millim. Iodo gelatina hymenialis dilute vinose rosello tincta.

Accedit versus *V. libricolam*, sed sporæ minores et simpliciores."—*Nyl. in litt.*

On the bark of trees: very sparingly gathered.

11. V. ALBESCENS, *SUBOCHRACEA, *Nyl.* "Differt præcipue thallo subochracee tincto; sporæ incolores vel subincolores, seriebus 4 bi- v. triloculosis, longit. 0·012–0·016 millim., crassit. 0·008–0·009 millim. Iodo gelatina hymenialis non reagens."

On thin bark: apparently frequent.

TONGATABU ISLAND.

1. LEPTOGIUM CYANIZUM, *Nyl.*

On trunks of trees: infertile. (This is described in 'Nyl. Syn.' p. 131, s. n. "*L. cyanescens*;" but this was formerly employed in 'Ach. Syn.' p. 326, as a var. of *L. tremelloides*.

2. RAMALINA SUBFRAXINEA, *Nyl.*

On branches: fertile.

3. GRAPHIS SCRIPTA, f. PULVERULENTA, *Ach.*

On bark of trees: sparingly gathered.

KOBE KIOTOS, Japan.

1. STEREOCAULON PROXIMUM, *Nyl.*

On the ground: sparingly fertile.

2. CLADONIA ADSPERSA, *Flk.*

On putrid stumps amongst mosses: fertile.

3. RAMALINA CALICARIS (*Hffm.*).

On trees?: a single small barren specimen.

4. Usnea dasypoga, *Ach.*
On branches: infertile.

5. Ricasolia glomulifera (*Lghft.*).
On trunks: fertile. (The thallus does not bear the parasitic *Homodium bolacinum* (Schær.).)

6. Parmelia subaurulenta, *Nyl.*
On the trunks of trees: fertile. (This is given also in Hook. fil. & Thoms. 'Ind. Or.' no. 2003.)

7. Peltigera canina, f. membranacea (*Ach.*).
Amongst mosses on trees? fertile.

8. Physcia speciosa (*Wulf.*).
Amongst mosses on trees? fertile. (The specimens are entirely typical, our European plant being referable to f. *sorediifera*.)

9. P. galactophylla, *Tuck.* (vid. *Flora*, 1869, p. 322).
On branches of trees: very sparingly gathered.

10. Pertusaria multipuncta (*T. & B.*).
On bark of trees: fertile. (Thecæ 1-sporæ; spores 0·070–0·150 millim. long, 0·054–0·068 millim. thick.)

11. Graphis scripta, *Ach.*
On branches: sufficiently typical.

Conspectus of the 'Challenger' *Lichens.*

Family Byssacei.

Tribe Sirosiphei.

Scytonema ——, sp. n.?

Family Collemacei.

Tribe Collemei.

Collema byrsinum, *Ach.*
Leptogium laceratulum, *Nyl.* sp. n.
—— tremelloides, *Ach.*
—— azureum (*Sw.*).
—— diaphanum (*Sw.*).
—— cyanizum, *Nyl.*
Collemopsis pelia, *Strn.* sp. n.

Family Lichenacei.

Tribe Bæomycetei.

Bæomyces chilensis (*Mdt.*).

Tribe Stereocaulei.

Stereocaulon cymosum, *Cromb.*
—— ramulosum (*Ach.*).
—— proximum, *Nyl.*
—— mixtum, *Nyl.*

Tribe Cladoniei.

Cladonia fimbriata, *Hffm.*
—— —— f. costata, *Flk.*
—— acuminata, * hebescens, *Nyl.*

Cladonia fibula (*Ach.*).
—— cornuta (*L.*).
—— sobolifera (*Del.*).
—— adspersa, *Flk.*
—— mitrula, *Tuck.*
Cladia aggregata (*Sw.*).

Tribe Roccellei.

Roccella tinctoria, *DC.*
—— phycopsis, *Ach.*

Tribe Ramalinei.

Ramalina rigida (*Pers.*).
—— complanata (*Sw.*), *Ach.*
—— subfraxinea, *Nyl.*
—— calicaris (*Hffm.*).
—— Yemenensis (*Ach.*).
—— cuspidata, var. crassa, *Del.*
—— minuscula, *Nyl.*
—— intermedia (*Del.*).

Tribe Usneei.

Usnea microcarpa, *Pers.*
—— dasypoga, *Ach.*
—— ceratina, *Ach.*
—— trullifera, *Nyl.*, sp. n.
Neuropogon melaxanthus (*Ach.*).
—— ——, var. ciliata, *Nyl.*
—— Taylori (*Hook. fil.*).

Tribe Parmeliei.

Parmelia perforata, *Ach.*
—— latissima, *Fée.*
—— perlata (*L.*).
—— tinctorum (*Despr.*).
—— revolutella, *Nyl.*, n. sp.
—— persulphurata, *Nyl.*
—— subaurulenta, *Nyl.*
—— conspersa, *Ach.*
—— glabra (*Schær.*).

Tribe Stictei.

Stictina intricata, f. Thouarsii (*Del.*).
—— carpoloma (*Del.*), *Nyl.*
Sticta pulmonacea, *Ach.*
—— damæcornis (*Sw.*).
—— neariloba (*Mnt.*).
—— hypopsila, *Nyl.*
—— caperata, *Bory*, *Nyl.*
—— dichotomoides, *Nyl.*
—— aurata, *Ach.*
—— subvariabilis, *Nyl.*
Ricasolia glomulifera (*Lghft.*).

Tribe Peltigerei.

Peltigera polydactyla, f. hymenina (*Ach.*).
—— canina, f. membranacea (*Ach.*).

Tribe Physciei.

Physcia flavicans (*Sw.*).
—— leucomela (*Sw.*).
—— podocarpa (*Bel.*), *Nyl.*
—— podocarpoides, *Nyl.*, sp. n.
—— galactophylla, *Tuck.*
—— speciosa (*Wulf.*).
—— Leana, *Tuck.*
—— obsessa (*Mnt.*).
—— adscensionis (*Ach.*).

Tribe Pyxinei.

Pyxine ——, sp. ?

Tribe Lecanorei.

Pannaria rubiginosa (*Thunb.*).
—— dichroa (*Tayl.*).
—— nigrocincta (*Mnt.*).
—— pannosa (*Sw.*).
Heppia meiolepis, *Cromb.*, sp. n.
Lecanora (Squamaria) saxicola, (*Poll.*).

Lecanora (Squamaria) melanophthalma (*Ram.*).
—— (Placodium) subelegans, *Nyl.*, sp. n.
—— —— flavorubens, *Nyl.*
—— —— lepidoplacum, *Nyl.*, sp. n.
—— (Placopsis) gelida, *Ach.*
—— ——, f. vitellina, *Bab.*
—— ——, f. lateritia, *Nyl.*
—— —— macrophthalma (*Tayl.*).
Lecanora pyracea (*Ach.*).
—— cyphelliformis, *Cromb.*, n. sp.
—— subfusca, var. subgranulata, *Nyl.*
—— ——, * sylvestris, *Nyl.*
—— granifera, var. leucotropa, *Nyl.*
—— Bermudensis, *Nyl.*, sp. n.
—— Teneriffensis, *Nyl.*, sp. n.
—— chlaronella, *Nyl.*, sp. n.
—— Vincentina, *Nyl.*, sp. n.
—— glaucomodes, * conflectens, *Nyl.*
—— recubans, *Strn.*, sp. n.
—— parella, *Ach.*
Dirina repanda, *Fr.*, var.

Tribe Pertusariei.

Pertusaria multipuncta (*T. & B.*)
—— pustulata, *Ach.*
—— velata (*T. & B.*).
—— papillata (*Ach.*).
—— aleianta, *Nyl.*, sp. n.

Tribe Thelotremei.

Urceolaria scruposa, *Ach.*
—— ——, * bryophila, *Ach.*

Tribe Lecideei.

Cœnogonium confervoides, *Nyl.*
Lecidea fuscorubescens, *Nyl.*
—— heterobola, *Cromb.*, n. sp.
—— endoleuca, *Nyl.*
—— leptocheiloides, *Nyl.*, sp. n.
—— leucoblephara, *Nyl.*
—— semiusta, *Strn.*, sp. n.
—— revertens, *Strn.*, sp. n.
—— Taitensis, *Mnt.*
—— canescens (*Dcks.*).
—— epiplacodia, *Cromb.*, sp. n.
—— stephanodes, *Strn.*, sp. n.
—— distinguenda, *Cromb.*, sp. n.
—— atrobrunnea (?), *DC.*
—— Acunhana, *Nyl.*, sp. n.
—— myriocarpa, *DC.*
—— insperata, *Nyl.*
—— superjecta, *Nyl.*, sp. n.
—— Fernandezii, *Cromb.*, sp. n.
—— geographica (*L.*).

Tribe Graphidei.

Opegrapha dialeuca, *Cromb.*, sp. n.
—— subvulgata, f. absita, *Nyl.*
Platygrapha stenogramma, *Nyl.*, sp. n.
Arthonia polymorphoides, *Nyl.*, sp. n.
—— rubella, *inferiuscula, *Nyl.*
Graphis scripta, *Ach.*
—— ——, f. pulverulenta, *Ach.*
—— tenella, *Ach.*
—— assimilis, *Nyl.*
—— striatula, *Ach.*
—— dendrogramma, *Nyl.*, sp. n.
—— Afzelii, *Ach.*
—— lobata (*Eschw.*).
Chiodecton rubrocinctum (*Ehrnb.*).

Glyphia cicatricosa, f. favulosa (*Ach.*).

Tribe Pyrenocarpei.

Verrucaria æthioleola, *Ach.*
—— ruderella, *Nyl.*, sp. n.
—— paramera, *Nyl.*, sp. n.
—— albescens, *subochracea, *N.*
Verrucaria cinchonæ, *Ach.*
—— congestula, *Strn.*, sp. n.
Melanotheca aciculifera, *Nyl.*
Trypethelium cruentum(*Mnt.*).

Tribe Peridiei.

Endococcus thalamita, *Nyl.*, sp. n.

Note on the Blimbing (*Averrhoa Bilimbi*, Linn.). By R. Irwin Lynch, Esq. (Communicated by Dr. J. Murie, F.L.S.)

[Read June 21, 1877.]

I have the pleasure of bringing before the Society an instance of leaf-movement which I believe to have some physiological interest.

The leaflets of the Blimbing (*Averrhoa Bilimbi*, Linn.) are depressed to nearly the position of sleep, spontaneously, from time to time during the day. The act takes place so slowly in succession as very easily to escape observation, and to be properly seen requires the attention of some minutes. The leaflets move down with tolerable quickness, perhaps in three or four seconds, but rise again so slowly that the motion is quite imperceptible. The movement is not spasmodic, as in *Desmodium gyrans*, but is perfectly steady and continuous up to completion. One leaflet only of a leaf has been seen in downward motion at the same time, and a few only are down together. There seems not to be a strict order of rotation; a leaflet being down, the next to follow may be the one most nearly opposite, or the one next below on the same side. The terminal leaflet is often active, and appears to move without reference to those nearest to it. A leaflet has been observed to make a descent three times within half an hour. This plant, besides having a spontaneous movement throughout the day (temperature and light being favourable) is subject also to the condition of sleep, and is sensitive to mechanical irritation.

No plant has perhaps been recorded as having the three kinds of movement all evident at sight. *Desmodium gyrans* is subject to sleep, and has spontaneous movement during the day and night, but is not appreciably sensitive. *Mimosa pudica* is sensitive and subject to the condition of sleep, but is without other

immediately evident spontaneous movement. *Averrhoa* appears to be without motion during sleep; but *Desmodium* even then continues gyration.

This observation on the Blimbing has yet to be worked out, and is brought before the Society because the present [date of reading] is the last meeting for the season. The special movement was observed but a few days ago. It is probable that allied plants have something to show; and *Averrhoa* itself requires considerable time from the slow repetition of its movements, influenced as they are also by light, temperature, &c.

Contributiones ad floram Algarum aquæ dulcis Promontorii Bonæ Spei. By Paul Frederic Reinsch. (Communicated by Dr. Hooker, Pres. R.S., F.L.S.)

[Read April 19, 1877.]

(Plate VI.)

Cum speciminibus in Insula Kerguelensi selectis accepi specimina Algarum aquæ dulcis in Promontorio Bonæ Spei autumno 1874 a cl. A. Eaton collecta. Quæ specimina consistebant in octo numeris speciminum in charta siccatorum et sex ampullulis vitreis cum speciminibus in spiritu vini asservatis. Numerus totus (sine Diatomophyceis) specierum a me inventarum in his ad inquirendum traditis speciminibus est 57; ab his sunt 16 Phycochromophyceæ et 41 Chlorophyllophyceæ. Secundum ordinem systematis adducta scrutationis summa est hæc:—

Phycochromophyceæ.	
Chroococcaceæ	Spec. 5, gen. 3.
Oscillariaceæ	Spec. 4, gen. 4 (sp. n. 1).
Nostochaceæ	Spec. 1 (sp. n.).
Scytonemaceæ	Spec. 1.
Sirosiphoniaceæ	Spec. 5, gen. 1.
Rivulariaceæ	Nulla.
Chlorophyllophyceæ.	
Palmellaceæ	Spec. 3, gen. 3 (sp. n. 2).
Protococcaceæ	Spec. 8, gen. 6 (sp. n. 4).
Desmidieæ	Spec. 15, gen. 5 (sp. n. 4).
Zygnemaceæ	Spec. 2, gen. 2 (sp. n. 1).
Confervaceæ	Spec. 2, gen. 2.
Chætophoraceæ	Spec. 2, gen. 2 (sp. n. 1).

Œdogoniaceæ	Spec. 2, gen. 1.
Ulvaceæ	Spec. 2, gen. 2.
Chroolepideæ	Spec. 1 (sp. n.).
Chytridieæ	Spec. 4, gen. 3.
Volvocineæ, Ulotricheæ, Gongrosireæ, Sphæropleaceæ, Vaucheriaceæ, et Rhodophyceæ.	Nulla sp.

Numerus specierum novarum inventarum est 15, ex his 2 Phycochromophyceæ et 13 Chlorophyllophyceæ.

PHYCOCHROMOPHYCEÆ.

CHROOCOCCUS TURGIDUS, *Kützing*. Specimina bicellularia dispersa inter *Lyngbyam æruginosum*, var. Salt river. Specimina *C. chalybei*, Rabenhorst (Alg. Europ. Nr. 1144), e Saxonia Syn. =*Protococcum turgidum*, Kützing (Tab. Phyc. i. tab. 6. fig. 1, p. 5), et ab aliis locis Germaniæ maxime consentiunt cum speciminibus Africanis in magnitudine ac colore cellularum.

GLŒOCAPSA CONGLOMERATA, *Kützing*. Cellulæ geminatæ et quaternatæ in massulas irregulares foliis *Jungermanniarum* adhærentes aggregatæ. Hæc plantula sæpe invenitur in *Jungermanniis*; specimina Africana valde consentiunt cum speciminibus Europæis.

Overhanging rocks. Summit of Table Mountain.

G. MAGMA, *Kützing*. Indumentum cellularum obscure rubrum, lamellosum. *G. magma* repræsentat bonam speciem a *G. rupestri* indumentis tenuioribus intense coloratis sat distinctam. Specimina Europæa consentiunt. Plerumque invenitur hæc plantula in rupibus umbratis; rupes Montis Tabulæ in quibus *Chroolepus* crescebat cum maxima verisimilitate hac *Glœocapsa* sunt obtecta.

On overhanging rocks of the summit of Table Mountain.

GLŒOTHECE CONFLUENS, *Nægeli* (Gatt. einz. Alg. tab. 1. fig. 1). Longit cell. 0·0056–0·0084 millim. Massulæ parvulæ gelatinosæ *Jungermanniis* ac *Chroolepo* Montis Tabulæ, sp. n., adhærentes.

Summit of Table Mountain.

HYDROCOLEUM HOMŒOTRICHUM, *Kützing* (*Tab. Phyc.* i. tab. 56. fig. 1). Diam. trichom. 0·0041 millim. Trichomata terna usque quaterna in fasciculos coalita, vaginis pellucidis subcrassis (crassioribus quam in icone Kützingiana). In fasciculis singulis inter radiculas *Ricciæ*.

Sp. near the Kloof road, not far from the town. Wet clay.

Chroococcus cohærens, *Nægeli* (*Rabenhorst*, *Algæ Europæ*, *Nr.* 446; *Kützing*, *Tab. Phyc.*). Cellulæ quadrigeminæ, sæpe 12- et 16-geminæ. Diam. cellular. 0·0028–0·0041 millim. In plantis aquaticis inter *Spirogyram*.

Fountain, Government House.

Huc observationem insero de Alga Phycochromacea parasitica. In *Ricciæ* spec. parenchymate in speciminibus paucis in ampullula cum terra adhærente in spiritu vini asservatis observavi corpuscula a cellulis velata, quæ interdum inveniuntur in *Anthocerotis* et in *Blasiæ* parenchymate. Quæ corpuscula primo observata a cl. Hooker, postea Algas parasiticas ad *Nostochaceas* spectantes cognita. Evolutio physeumatis *Nostochidis* ex trichomate singulo impresso in lacunis aëreis in parenchymate *Anthocerotis* observabatur paucos annos ante*. Compages parasiticæ hic delineatæ non sunt compositæ ex *Nostochide*, imo vero ex *Polycocco*. Cellulæ sphæricæ absque ordine arctissime adjacentes colore obscure olivaceo-viridi 0·0028–0·0041 millim. diametro a peridermate distincto (in sectione transversali) circumvelatæ. His compagibus desunt fila unicellularia ramosa, quæ in *Blasia pusilla* colonias Nostochoideas parasitice nidulantes omni directione percurrunt et quæ prolongationes e radiculis egressas in interiorem partem plantæ versas repræsentant.

Chthonoblastus salinus, *Kützing*, var. Fasciculis apicibus subito attenuatis, trichomatibus spiraliter curvatis, cellulis rectangularibus diametro subæqualibus, vaginis hyalinis (non lamellosis) quam formæ typicæ vaginæ tenuioribus. Diam. trichom. 0·0028–0·0041 millim. Diam. fascic. 0·066–0·13 millim. Inter *Lyngbyæ æruginosæ*, var. *Africanæ*, cæspites in fasciculis singulis.

On mud. Salt river.

Lyngbya æruginosa, *Agardh.*, var. Africana. *L.* trichomatibus ærugineis rigidis prolongatis in cæspitibus latissimis crasse membranaceis obscure ærugineo-viridibus dense intertextis, cellulis diametro 5plo–6plo brevioribus ad genicula lineis binis punctulatis instructis; cellulis perdurantibus raris sphæricis; vaginis hyalinis et fuscescentibus subtiliter lamellosis. Diam. trichom. (c. vagin.) 0·033 millim. Diam. trichom. intern. 0·0196 millim.

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* E. v. Zancfewski, "Zur parasitischen Lebensweise der *Nostoc ichenoides*," Botan. Zeitung, 1872, no. 5.

Hab. "Salt river. On mud at low water."

Cæspites duo maximi trichomatibus densissime intertextis, vaginis fuscescentibus et fuscis. Pulcherrimum *Chlorococcum Africanum*, sp. n., in cellulis numerosis includentes. Aliud specimen ejusdem *Lyngbyæ* siccatum eodem loco, "Salt river, brook in ditch," continet trichomata laxius intricata colore pulchre ærugineo, singulis trichomatibus *Leibleiniæ*, n. sp., obtecta. A forma typica ab oris marium borealium Europæis differt tantum trichomatibus crassioribus ($\frac{3}{5}$), vaginis crassioribus distinctius lamellosis.

Spermosira macrospora, spec. nov. *S.* trichomatibus liberis subcontortis, cellulis pallide ærugineis subsphæricis usque ellipsoidicis (ante divisionem), laxe cohærentibus, cytioplasmate subtiliter granuloso; cellulis perdurantibus sphæricis quam ceterarum cellularum diameter paulo majoribus; sporis 12is–20is seriatis, exacte sphæricis, laxe cohærentibus, quam diameter ceterarum cellularum triplo majoribus, cytiodermate crasso fusco, cytioplasmate homogeneo subtilissime punctulato. Diam. cellular. 0 0028–0·0041 millim. Diam. cellul. perdur. 0·0041–0·0056 millim. Diam. sporarum 0·0084–0·0097 millim.

Hab. In *Enteromorpha compressa, ζ. trichodi* in cæspitulis parvulis usque lineam latis.

Freshwater pool near Salt river.

Hæc plantula elegantissima nova inter *Spermosiram* et *Anabainam* est ponenda; cum *Anabainis* cellularum ac sporarum forma consentit, sed differt sporis seriatis; a *Spermosiris*, quibuscum sporis seriatis consentit, differt sporarum ac cellularum forma. Interdum plantulam ad *Spermosiram* pono donec inveniantur species aliæ adhuc pertinentes.

Leibleinia moniliformis, spec. nov. *L.* cæspitulos laxos usque lineam longos formans, trichomatibus rectis basi paulo dilatata cohærentibus intensive ærugineo-viridibus (interdum in modo *Scytonematis* pseudo-ramulis binis lateralibus), cellulis distinctis moniliformibus diametro quadruplo v. quintuplo brevioribus, cytioplasmate subtiliter granuloso, cellulis summis trichomatis in modo *Oscillariarum* articulatis, cellulis interstitialibus (sporis) in quoque trichomate compluribus ellipsoidico-sphæricis usque subsphæricis diametro ceteras cellulas æquantibus, cytiodermate subcrasso aureo-fuscescente, cytioplasmate hyalino; vaginis subcrassis hyalinis subhomogeneis, superne plerumque vacuis. Diam. trichom. (c. vagin.) 0·0278–0·0306 millim. Diam. trichom. intern. 0·0168–0·0196 millim. In *Lyngbyæ* æruginosæ, *Ag.*, var. *Africanæ*, trichomatibus et in physeumate *Enteromorphæ* compressæ.

Salt river. In a ditch.

Leibleinia æruginea (in *Polysiphoniis*, Mare Adriaticum), *L. australis* (ora Novæ Hollandiæ), *L. virescens*, et *L. flavida* differunt: cellulis omnibus oscillaroideis, cellulis interstitialibus rarioribus.

SCYTONEMA ELEGANS, *Kützing*, forma. Trichomata subcontorta, vaginæ sublamellosæ pallide fuscæ, cellulæ perdurantes crebriores subobovales. Diam. trichom. 0·0056–0·0084 millim. Trichomata subrecta, vaginæ hyalinæ subhomogeneæ decolores cellulæ perdurantes rariores. Inter alias Algas (*Penium rupestre*, *Glœocapsam magma*) inter *Chroolepum* Montis Tabulæ.

SIROSIPHON SECUNDATUS, *Kützing* (*Tab. Phyc.* ii. tab. 37. fig. 7), forma vaginis fuscis. Ramulis numerosioribus brevioribus et singulis ramulis prolongatis, cellulis laxius positis. Inter radiculas terra argillacea involutas plantularum *Ricciæ* spec. sterilis.

Kloof road, not far from the town.

S. PANNIFORMIS, *Kützing* (*Tab. Phyc.* ii. tab. 36. fig. 2), vaginis fuscis. Specimina pauca minora in *Jungermanniis*.

Summit of Table Mountain.

S. PULVINATUS, *Kützing*. Cellulis subsphæricis majoribus, cellulis trichomatis primarii pluriseriatis vaginulis internis distinctissimis fuscis. In foliis *Jungermanniæ* inter *Chroolepum* Montis Tabulæ.

Summit of Table Mountain.

Var. INTERMEDIUS (*S. intermedius*, Kützing, Tab. Phyc. ii. tab. 36. fig. 4), trichomatibus uniseriatis vaginulis internis distinctis fuscescentibus.

S. PULVINATUS, var. vaginis pellucidis decoloribus. In trichomatibus singulis inter radiculas *Ricciæ*.

Kloof road, on wet clay.

S. PULVINATUS, var. cellulis oblongis apicem trichomatum versus arctissime connexis. Diam. trichom. 0·0024–0·0278 millim. Inter alias Algas et in *Jungermanniis* inter *Chroolepum*.

Summit of Table Mountain.

S. PULVINATUS, var. Trichomatibus inæqualibus flexuosis irregulariter ramosissimis ramulis fasciculatis inæqualibus, cellulis irregulariter seriatis subangulosis intense ærugineis, vaginis subhomogeneis mediocribus aureo-fulvis. Diam. trichom. 0·0278–0·033 millim. A forma typica vaginarum colore ac cellulis angulosis irregulariter seriatis distincta forma. Inter alias Algas inter *Chroolepum* Montis Tabulæ.

Summit of Table Mountain.

S. OLIVERI, *Reinsch* (*Alg. aq. d. Ins. Kerguel.*). Latit. trichom. 0·0168–0·0196 millim. Trichomata dispersa inter alias Algas (*Glœocapsam magma*, *Scytonema elegans*, var., *Penium rupestre*, etc.) inter cæspites *Chroolepi* Montis Tabulæ.

Overhanging rocks. Summit of Table Mountain.

Hæc species in Insula Kerguelensi inventa non variare videtur. Specimina Africana paulo subtiliora consentiunt cum speciminibus Insulæ Kerguelensis et in cellularum magnitudine et in forma et dispositione.

S. ALPINUS, *Kützing* (*Tab. Phyc.* ii. tab. 35. fig. 2). Var. trichomatibus irregulariter abrupte ramosis æqualiter latis, uniseriatis, cellulis pachydermaticis arctissime connexis vaginis firmis fuscescentibus cinctis. Diam. trichom. 0·0278 millim. Inter *Jungermannias*.

Summit of Table Mountain.

In ramificationis modo ac crassitudine trichomatum ac cellulis uniseriatis pachydermatis hic *Sirosiphon* cum *S. saxicola*, mihi tantummodo ex delineatione Kunzingiana noto, aliqua similitudine consentit, sed differt cellulis angustioribus, vagina crassiore.

CHLOROPHYLLOPHYCEÆ.

PALMELLA BREBISSONII, *Kützing*. Familiæ minores irregulares, cellulis sphæricis homogeneis singulis. Diam. cellular. 0·0022–0·0028 millim. In *Chroolepi* Montis Tabulæ filis.

Summit of Table Mountain.

Ex *Palmellis* viridibus *P. Brebissonii* et *botryoides* inveniuntur in ligneis putrescentibus humi jacentibus et in cavernis humidis crescentes, ceteræ *Palmellæ* virides in aquis stagnantibus ac in vitreis fenestris caldariorum occurrunt. *P. botryoides* cellulis fere duplo majoribus format thallum plurimum expansum, gelatinosum, ætate provectiore tuberculosum.

SCENEDESMUS QUADRICAUDATUS, *Corda*. Inter *Spirogyram*.
In the fountain at Government House.

Forma communis major cellulis externis spinis divergentibus, et forma minor cellulis externis spinis ternis armatis.

S. ACULEOLATUS, spec. nov. *S.* cellulis oblongo-cylindricis utroque polo obtuso-rotundatis, spinulis compluribus brevioribus absque ordine dispositis armato. Longit. fam. 4-cellularis 0·0196 millim. Latit. cellular. 0·013–0·0168 millim. Specimina singula observata inter *Spirogyram*. Pl. VI. figs. 1 & 2.
In the fountain at Government House.

Propter cytiodermatis proprietatem, hunc *Scenedesmum* esse propriam speciem certissime puto. In *Scenedesmis* dimensiones ac formæ cellularum observantur majore variabilitate quam in aliis *Protococcis*, qua de causa hæc propria ad definiendas *Scenedesmi* species minore momento se offerunt.

STAUROGENIA CUBICA, spec. nov. *S.* cœnobio rectangulari ex stratis cellularum duobus composito, cellulis minimis subovalibus regulariter seriatis. Longit. cœnobii 0·0168 millim. Latit. cœnobii 0·013 millim. Diam. cellular. 0·0041 millim. In cœnobiis sparsis inter *Spirogyram*. Pl. VI. figs. 15 & 16.
In the fountain at Government House.

POLYEDRIUM MUTICUM, *A. Braun*, forma. *P.* cellulis triangularibus, angulis obtuso-rotundatis, marginibus lateralibus rectis. Latit. 0·0224 millim. In speciminibus singulis inter *Spirogyram*.
In the fountain at Government House.

CŒLASTRUM SCABRUM, spec. nov. *C.* familiis cubicis et sphæricis, cellulis sphæricis verrucis 3-is–6-is firmis truncatis regulariter dispositis apice punctulatis instructis. Diam. cellular. 0·0097 millim. Diam. fam. 8-cellularis 0·0196 millim. Diam. fam. 16-cellularis 0·0333 millim. Inter *Spirogyram* in familiis singulis.
In the fountain at Government House.

C. VERRUCOSUM, *Reinsch*, *Contributiones*, p. 77 (*Chlorophyl.*), tab. xii. fig. 8. Persimile, differt verrucis tenuioribus pluribus irregulariter dispositis.

CHLOROCOCCUM AFRICANUM, spec. nov. *C.* e maximis, cellulis singulis sphæricis colore intensive aurantiaco-fuscescente; cytiodermate extrorsum distincte subtilissime lamelloso; cytioplasmate subtiliter granuloso (plerumque cellulis filialibus? 4-is minoribus dispersis inclusis). Diam. cellular. 0·118–0·144 millim. Crassit. cytioderm. 0·0028–0·0041 millim. Inter *Lyngbyæ æruginosæ*, var., cæspites in cellulis numerosis.

Salt river. On mud when the tide is out.

Ex omnibus hucusque cognitis *Chlorococcis* maxima species. *Chlorococcum Wimmeri*, Rabenh. (*Protoccoccus Wimmeri*, Hilse, in Rabenh. Algæ Europæ, Nr. 1031), proxima species (maxima hucusque cognita), cellulis intensive coccineo-aurantiacis (diametro 0·0504–0·0615 millim.), cytiodermate crassissimo plurilamelloso, in fodinis margaceis periodice aqua repletis in Silesia a clar. Hilse detectum, differt ab hac specie nova cellulis duplo minoribus, cytiodermatis structura diversa ac cytioplasmatis diverso colore. Cytioderma exterius cellularum componitur ex stratis binis distinctissime limitatis substantia interposita hyalina subtilissime lamellosa. Cytioderma exterius *C. Africani* ex strato uno componitur lamellulis subtilissimis interpositis.

BOTRYOCOCCUS GIGANTEUS, spec. nov. *B.* libere natans, thallo subellipsoidico in lateribus omnibus clauso, cellulis prismaticis subcuneiformibus apicibus late obtuse rotundatis arctissime se adtingentibus, cytiodermate crasso (in latere exteriore cellularum paulo incrassato), cytioplasmate granulis dense repleto. Longit. thalli 0·218 millim. Latit. thalli 0·163 millim. Longit. cellul. 0·0278 millim. In speciminibus singulis inter *Spirogyram insignem.*

In the fountain at Government House.

Hic *Botryococcus* a *B. Braunii* cellulis prismaticis dimensionibus cellularum duplo majoribus sat distincta species.

PEDIASTRUM PERTUSUM, *Kützing.* 8-clathratum. Cœnobia singula cellulis secundum ordinem 1, 5, 10, dispositis, cellulis marginalibus usque infra medium longitudinis cellulæ incisis, cornulis rectis. Inter *Spirogyram insignem.*

In the fountain at Government House.

PALMOGLŒA MACROCOCCA, *Kützing.* Latit. cellular. 0·013–0·0168. In massulis parvulis in *Jungermanniis* et in filis *Chroolepi* Montis Tabulæ, sp. n., adhærentibus. Inter radiculas *Ricciæ.*

Kloof Road, Cape Town.

PALMOGLŒA CHLAMYDOSPORA, *De Bary*, var. MINOR. Latit. cellular. 0·0068 millim. Latit. zygosporæ evolutæ 0·0196 millim. A speciminibus Erlangensibus dimensionibus omnium partium duplo plus minoribus distincta forma, sed in formac ellularum ac zygosporæ æqualis; zygospora quadrangularis, marginibus aut tantum marginibus duobus oppositis emarginatis. In speciminibus singulis capulatis inter *Zygnema tetraspermum* in ampulla signata.

"On the summit of Table Mountain in rain-pools."

PENIUM BREBISSONII, *Kützing*. Longit. 0·033–0·084 millim. Latit. 0·0168 millim. In chartæ particula collectioni adita massulæ expansæ erant compositæ ex hac specie.

Cape Flats.

P. RUPESTRE, *Kützing* (*Trichodictyon rupestre*, Tab. Phyc. i. tab. 26. fig. 1). Latit. cellul. 0·0112–0·013 millim. Longit. 0·0168–0·0196 millim. In massulis gelatinosis inter *Jungermannias* et *Chroolepum* Montis Tabulæ, sp. n.

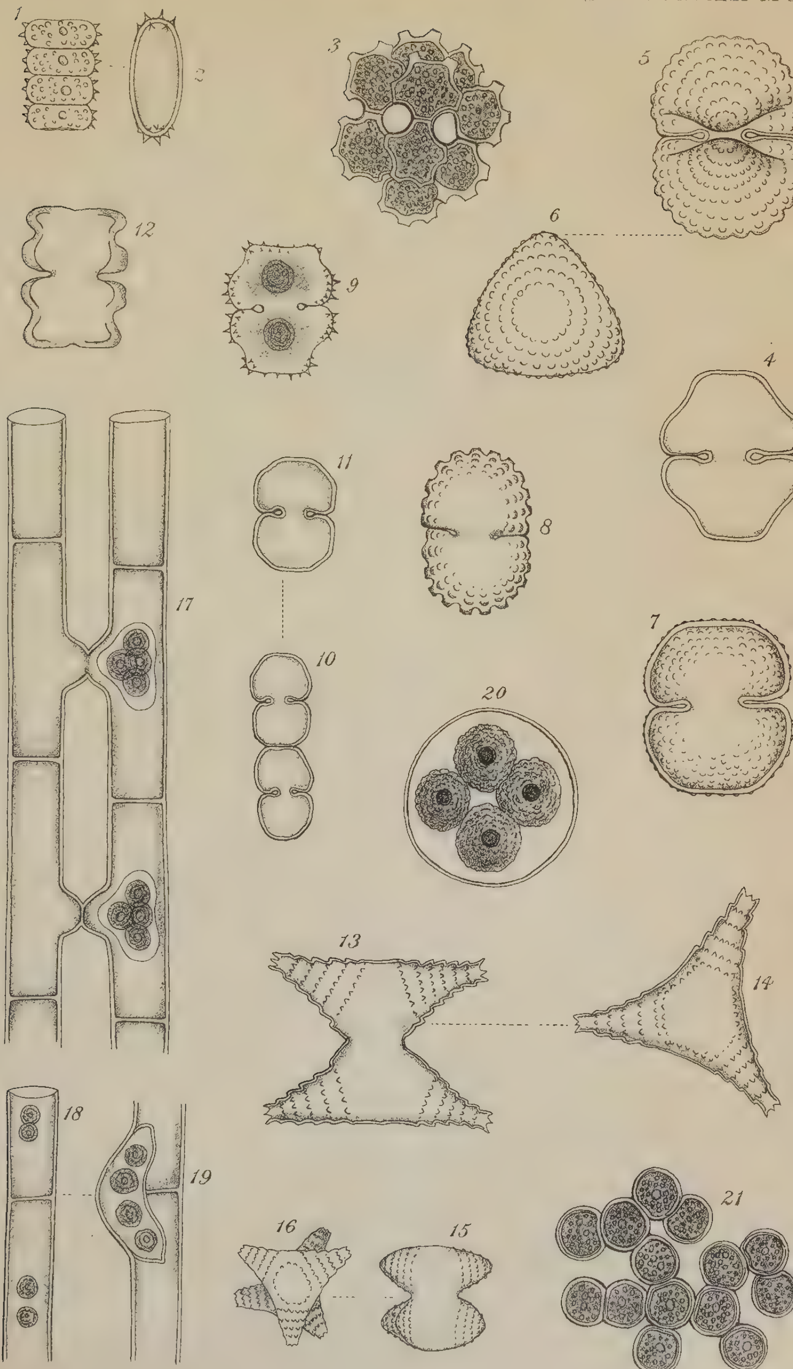
Summit of Table Mountain.

COSMARIUM PARVULUM, *Brébisson* (*Liste des Desmid.* p. 133, tab. i. fig. 18, tab. vii. fig. 21). Forma semicellulis a fronte visis marginibus lateralibus emarginatis, lobulis basalibus paulo productis rotundatis extrorsum se adtingentibus, margine terminali levissime inciso. Longit. 0·0305 millim. Latit. 0·013 millim. Inter *Spirogyram*.

"From a fountain in the grounds of Government House," in speciminibus singulis.

C. HAMMERI B, INTERMEDIUM, *Reinsch* (*Gen. et Spec. Nov.*, *Acta Senckenberg*. vol. vi. 1867, p. 7, tab. iii. B, fig. 1, 2, 3, 5; C. HOMALODERMUM, *Nordstedt*, *Desmid. Arctoæ. Vetensk. Akadem. Förhandl. Stockholm*, 1875, p. 18, tab. vi. fig. 4). Longit. 0·0252–0·0306 millim. Latit. 0·0252–0·0278 millim. Marginis terminalis latitudo dimidium (et paulo minus) diametri transversalis, isthmi latitudo triens diametri transversalis. Sicut in specimine in 'Desmid. Arctois' delineato cytioderma in isthmi angulo subincrassatum. Pl. VI. fig. 4.

Hæc forma maxime consentit cum speciminibus Germanicis et cum *C. homalodermo*, Nordstedt. Forma D, *octogibbosum*, prius descripta, quam nunc speciem propriam puto, est disjungenda a *C. Hammeri*. Nomen speciei antea inventæ et descriptæ retinerem.



J.N.Fitch lith.

FRESH WATER ALGÂE

COSMARIUM ABNORME, *Nordstedt* (*Desmid. Spetsberg. et Beerens Eiland. Akad. Förhandl. Stockholm.* N. 6. p. 32, tab. vi. fig. 15), var. TRIQUETRUM. Longit. 0·0363 millim. Latit. 0·0278 millim. Specimina a fronte visa in dimensionibus ac in forma maxime consentiunt cum icone Nordstedtiana; speciminum Africanorum e vertice visorum anguli minus rotundati marginesque laterales in medio subrecti aut levissime tumidi. Pl. VI. figs. 5 & 6.

"In a rain-pool on the Cape Flats, near Claremont," schedula in ampullula.

C. PUNCTULATUM, *Brébisson* (*Liste des Desm.* p. 129, N. 24, tab. i. fig. 16). Longit. 0·0248 millim. Latit. 0·0224 millim. Cellularum cytioderma verruculis punctiformibus absque ordine dispositis subtiliter verruculosum. Certissime species propria, nullo modo *C. margaritiferi*, Meneghini, forma juvenilis. Inter *Spirogyram*. Pl. VI. fig. 7.

In a fountain in the grounds of Government House.

C. PLICATUM, *Reinsch*, B, MINUS (*Sp. et Gen. nov., Acta Senckenberg.* vol. vi. p. 6, tab. iii. C, fig. ii. 1, 2, 3.—C. sinuosum, *Lundell, Desmid. Suec.* p. 47). Longit. 0·0393 millim., latit. 0·0224 millim., latit. isthmi 0·0112 millim. Cellulæ polis paulo impressis, cytiodermata (speciminum vacuorum) margine subtiliter longitudinaliter striato. Maxime consentit et in magnitudine et in forma semicellularum cum formæ B (*minus*) speciminibus Erlangensibus margine terminali plerumque subrecto.

C. PULCHERRIMUM, *Nordstedt* (*Desmid. Ins. Spetsberg et Beerens Eiland, K. Vetenskap. Akad. Förhandl. Stockholm*, 1872, p. 32, tab. vi. fig. 14). Longit. 0·0421 millim., latit. 0·0333 millim., latit. isthmi 0·0084 millim. Cellularum superficies in media parte punctulato-verruculosa, margines laterales 5–6 gibberulis verruculosis instructi, verruculæ marginum indistincte radiatim dispositæ. *Cosmaria* complura a clar. Nordstedt descripta;—*Cosmarium subspeciosum*, *pycnochondrum*, *costatum*, *subreniforme*, *pulcherrimum*, maxima versimilitudine mihi videntur formæ cohærentes unius speciei.

C. PULCHERRIMUM? *Nordst.*, forma cellulis ellipticis diametro transversali tres quintas diametri longitudinalis æquante, semicellulis semicircularibus, marginibus æqualiter crenato-incisis introrsum verruculis radialiter positis verrucosis; isthmi latitudo quarta pars diametri transversalis, longit. 0·0306 millim., latit. 0·0196 millim. Pl. VI. fig. 8.

In a rain-pool on the Cape Flats near Clermont.

COSMARIUM ASPERULUM, spec. nov. *C.* e minoribus, diametro transversali $\frac{3}{5}$ diametri longitudinalis, semicellulis subtrapezicis, nucleo amylaceo singulo, marginibus lateralibus obtusangule subincisis, margine terminali subrecto, lobulis basalibus rotundatis introrsum se adtingentibus, extrorsum aculeolis brevioribus (sicut margine terminali) armatis. Longit. 0·0224 millim., latit. 0·0116 millim. Pl. VI. fig. 9.

In a rain-pool on the Cape Flats near Clermont.

Cum *Cosmario protumido*, Norstedt (Desmid. Spetsberg. et Beerens Eiland, p. 34, tab. vii. fig. 18), in forma semicellularum aliqua similitudine consentit, ad contra margine terminali undato-inciso aculeolis marginum lobulorum crassioribus subregulariter positis.

COSMARIUM, spec. nov. *C.* e minimis, diametro transversali duæ partes diametri longitudinalis, semicellulis subtrapezicis, basi se adtingentibus, margine terminali recto, diametri transversalis dimidio paulo minus, angulis basalibus rotundatis, cytiodermate laevi ; isthmi latitudo triens diametri transversalis. Longit. 0·0168 millim., latit. 0·0112 millim., forma major, longit. 0·0196 millim., latit. 0·0153 millim. Inter *Spirogyram*. Pl. VI. figs. 10 & 11.

In a fountain in the ground of Government House.

Hoc *Cosmarium* jacet inter formam typicam *Cosmarii Hammeri* (Reinsch, Act. Senckenb. tab. 3 B. fig. 1–8) et formas minores *Cosmarii Meneghinii*, Brébisson.

EUASTRUM SUBINCISUM, spec. nov. *E.* e minoribus, in sciagraphia rectangulari incisura acutangula divisum ; semicellulis a fronte visis rectangularibus, trilobulatis, lobulis basalibus subrotundatis, in quoque latere gibberulo rotundato instructis, lobulo terminali lato a lobulis basalibus incisura rotundata disjuncto, margine terminali subrecto, in medio levissime inciso diametrum transversalem cellulæ subæquante, angulis rotundatis ; semicellulis e latere et e vertice visis rectangularibus, marginibus leniter emarginatis in quoque angulo gibberulo rotundato instructis ; cytiodermate lævi ; isthmi latitudo et corporis crassitudo dimidium diametri transversalis. Longit. 0·0224 millim., latit. 0·0178 millim. In speciminibus singulis. Pl. VI. fig. 12.

Cape Flats in a ditch near Clermont.

Euastrum venustum, Hantsch, paulo majus persimile, differt margine terminali inciso, lobulis basalibus se adtingentibus.

Staurastrum margaritaceum, *Ehrenberg.* Trigonum. Longit. 0·0278 millim., latit. 0·0393 millim. Pl. VI. figs. 13 & 14.

In a rain-pool on the Cape Flats near Claremont.

Anguli in cornulis producti sicut in speciminibus Europæis, furcati aculeolati; in dimensionibus cum speciminibus trigonis Erlangensibus maxime consentiunt.

S. exiguum, sp. nov. *S.* minimum, tam longum quam latum, sinu acutangulo; semicellulis ellipticis, margine terminali æqualiter curvato, angulis acutiusculis subrotundatis, e vertice visis trigonis marginibus lateralibus subrectis et leviter repandis, angulis (plerumque) alternantibus obtusis, verruculis in seriebus dispositis. Latitudo isthmi dimidio diametri transversalis paulo minor. Longit. 0·0196 millim., latit. 0·0196 millim.

In a rain-pool on the Cape Flats near Clermont.

Hoc *Staurastrum*, quod speciem propriam putarem, inter *S. punctulatum* et formas minores *S. margaritacei* jacens differt a primo angulis gracilioribus truncatis (non rotundatis), a *margaritaceo* dimensionibus minoribus ac angulis integris (non aculeolatis). Eandem speciem observavi prope Erlangam; specimina ab hoc loco dimensionibus paululo majoribus sinu paulo profundiore et latiore.

Spirogyra insignis, *Hassal* (*Kützing*, *Tab. Phyc.* v. tab. 31. f. 4), b, forma conjunctiva: elongata. Suringar (*Observ.* p. 16, tab. i.; *A. Rabenhorst. Fl. Europ. Alg.* ii. p. 236.). Latit. cellul. 0·0393 millim. Longitudo 8–12plum latitudinis.

From a fountain in the grounds of Government House.

Ampullula cum speciminibus in spiritu vini asservatis et specimina duo siccata.

Zygnema tetraspermum, spec. nov. *Z.* pallide viride, cellulis sterilibus et fructiferis æqualibus diametro 4plo-5plo longioribus geniculis planis (non constrictis), cytiodermate tenui, cytioplasmate hyalino homogeneo corpusculis chlorophyllaceis sphæricis binis; copulatione et scalariformi et una cellula cum laterali; zygosporis evolutis subsphæricis usque subtetraedricis sporodermate tenui subtiliter punctulato fuscescente, cytioplasmate ex corpusculis chlorophyllaceis quaternis distinctissimis nucleolis singulis instructis formato. Diam. cellular. 0·0168–0·0196 millim., diam. (medius) zygosporæ 0·0306 millim., diam. corpusc. chlorophyll. 0·0084–0·0112 millim. Pl. VI. figs. 17, 18, 19, 20.

"The summit of Table Mountain, in rock-pools of rain-water."

Ampullula cum speciminibus in spiritu vini asservatis ac specimina siccata. Fila omnia in statibus omnibus copulationis.

Hoc *Zygnema, Zygnemati Vaucherii* in cellularum sterilium structura persimile, differt cellulis fructiferis cellulis sterilibus æqualibus (nec inflatis), zygosporæ structura (sporodermate non lacunoso-punctato) ac dimensionibus ($\frac{2}{3}$) minoribus. E ceteris *Zygnematibus* consentit in cellularum dimensionibus cum *Zygn. subtili*, Kützing (Tab. Phyc. v. tab. 16. fig. 1, quod certissime tantummodo varietatem *Zygn. Vaucherii* repræsentat).

CONFERVA LÆVIS, *Kützing* (*Tab. Phyc.* iii. tab. 43. fig. 2). Diam. cellular. 0·0056 millim. Longitudo cellularum duplum et triplum latitudinis, cytioderma subcrassum. A ceteris *Confervis* tenuioribus, *tenerrima*, *rhypophila*, *glaciali*, *subtili*, *nubecula*, *abbreviata*, *Funkii*, *flaccida*, *floccosa*, *fugacissima*, e quibus nonnullæ formæ cohærentes unius speciei, haud difficile cognoscenda species cytiodermate subcrasso. In filis dispersis inter *Zygnema tetraspermum*, spec. n.

In rain-pools at the summit of Table Mountain.

CHOREOCLONIUM PROCUMBENS, *Reinsch*, forma 3 (*Reinsch*, *Contributiones*, p. 77, tab. iv. fig. A). Latit. cellular. 0·5–0·8. Fila pauciora subramosa et absque ordine disposita et parallela, ramulis brevioribus laxius aut densius positis. In plantis aquaticis inter *Spirogyram* una cum *Protodermate viridi* et *Limnodictyo*, spec.

In a fountain at Government House.

Plantula quoque inventa in Insula Kerguelensi, in *Nitella Hookeri* crescens, differt a plantulis Promontorii Bonæ Spei filis parenchymatice intertextis, ac consentit cum plantula Europæa, fig. B, in Contrib. delineata.

LIMNODICTYON, spec. *L.* plantis aquaticis affixum, cellulis circularibus absque ordine laxe parenchymatice cohærentibus, cytiodermate subcrasso. Diam. cellular. 0·0084–0·0097 millim. In plantis aquaticis cum *Choreoclonio* et *Protodermate viridi*, inter *Spirogyram*. Pl. VI. fig. 21.

In a fountain at Government House.

Certissime nonullæ plantulæ in plantis aquaticis crescentes ad *Limnodictyon* spectant. Species una hucusque cognita (*L. Roemerianum*) cum thallodibus natantibus ex cellulis angulosis pachydermis constituta, differt cellulis multo (5plo) majoribus.

CLADOPHORA SETIFORMIS, *Kützing* (*Tab. Phyc.* iv. tab. 58. fig. 4), var. PACHYDERMA. Fila valde elongata integerrima basi ramulis sparsis brevioribus, usque pedalia (et longiora), cellulis nodulis incrassatis pachydermis, inferioribus diametro usque duplo superioribus triplo v. sextuplo longioribus. Latit. cellular. 0·112–0·1235 millim., crassit. cytiodermatis 0·0168–0·0224 millim.

Salt River near Cape Town.

Specimina duo siccata. E *Cladophorarum* numerosarum speciebus paucioribus filis integris (*Cl. insignis*, *setiformis*, *linoides*, *calida*, *hyalina*, *sordida*, *margaritifera*, *lacustris*, *globulina*) hæc *Cladophora* pertinet ad *Cladophoram setiformem* (Cayenne, Le Prieur coll.).

CHROOLEPUS MONTIS TABULÆ, spec. nov. *C.* e maximis, cæspitulis dense fasciculatis usque 20 millim. altis, colore (siccatis) pallide rufo-virescente; filis subintegris stricto-erectis ramis sparsis erectis summis paululo incrassatis, cellulis rectangularibus et cylindricis diametro triplo usque quadruplo longioribus, cytiodermate crasso lamelloso, superficie striis subtilibus decussatis subtorulosa; sporangiis sessilibus lateralibus regulariter sphæricis. Filorum latit. (c. cytiodermate) 0·0168–0·0224 millim. Diam. sporang. 0·0393–0·0448 millim.

Hab. "Under overhanging rocks on the summit of Table Mountain."

In consortio *Jungermanniarum* minorum complurium. Hæc species nova *Chr. flavo*, Kützing (Tab Phycol. iv. tab. 96. fig. 1), proxima, in cellularum forma, cytiodermatis crassitudine ac structura, sed differt omnium partium dimensionibus duplo minoribus zoosporangiis ovalibus.

Hab. in arboribus Chili et Peru.

PROTODERMA VIRIDE, *Kützing.* Specimina minora ex cellulis angulosis constituta in fragmentis plantarum aquaticarum (*Callitriche* ?) inter *Spirogyram* exacte consentiunt cum speciminibus Germanicis ac cum speciminibus ex Insula Kerguelensi.

In a fountain at Government House.

Œdogonia duo in plantis aquaticis crescentia non sunt exactius determinanda propter penuriam oosporangiorum et oosporarum. Secundum cellularum dimensiones ac cellulæ basalis formam, *Œdogonium* unum cellulis basalibus breviter cuneiformibus filis basi attenuatis ad *Œdogonium nodosum*; *Œdogonium* alterum cellulis basalibus subcylindricis, cellulis omnibus æqualiter latis, ad *Œdogonium Rothii* spectat.

MICROTHAMNION EXIGUUM, spec. nov. *M.* filis erectis ramosis et subintegris subtilissimis indistincte articulatis, ramulis lateralibus integerrimis sparsis erectis apicibus paulo incrassatis, cellulis subtilissimis, cytioplasmate pallide viridi granulis majoribus instructo. Diam. filorum 0·0011–0·0026 millim. In plantis aquaticis (*Callitriche*) inter *Spirogyram*.

In a fountain at Government House.

A *Microthamnio* Kutzingiano et strictissimo filis subintegris tenuioribus ramulis integerrimis, a *M. cladophoroidi* (Alg. aq. d. Insulæ Kerguel.) filis multo tenuioribus ac modo ramificationis distinguitur.

ENTEROMORPHA COMPRESSA, *Gréville*, ζ. TRICHODES, *Kützing*.

In a freshwater pool near Salt river.

Physeumatis ramulis adhærent cæspituli *Spermosiræ macrospermæ*, spec. nov.

RHIZOPHYDIUM, spec. *R.* parasiticum cellulis sphæricis aggregatis orificiis plerumque binis (interdum singulo). Diam. cellular. 0·0112–0·0013 millim. Hab. in granulis pollinis (Abietinarum ?).

In a rain-pool on the Cape Flats near Claremont.

Hæc plantula parasitica orificiis binis haud dubio ad *Rhizophydium* spectat. *R. transversum* (*Chytridium transversum*, Al. Braun) in *Chlamydomonade Pulvisculo* et in *Gonio* nidulans in magnitudine et forma cellularum simile, differt cellulis evolutis transverse ellipticis ; *R. globosum* dimensionibus multo majoribus.

Contentus ampullulæ exhibens granula pollinis numerosa e Phanerogamis variis, tantummodo granulum unicum observabatur a parasita infectus. In cytioplasmate granuli est imposita cellula singula sphærica cytiodermate crasso, cytioplasmate dense granuloso ; utrum in connexione organica cum cellulis parasiticis extrorsum insidentibus ?

RHIZOPHYDIUM, spec. *R.* cellulis transverse ellipticis cohærentibus, orificiis binis aut ternis subtilissimis, cytiodermate crasso, radiculis nullis. Latit. cellular. 0·0056 millim., longit. 0·0112 millim. In *Œdogoniis* in plantis aquaticis inter *Spirogyram* affixis.

In a fountain at Government House.

Hæc plantula consentit cum parasita minuta non descripta in 'Tabulis Phycologicis' delineata in *Mougeotia genuflexa* crescente (Kützing, Tab. Phyc. v. tab. 1. fig. 3, filum dextrum).

OLPIDIUM, spec. *Ol.* epiphyticum, cellulis subsphæricis arctissime conjunctis fila breviora integra formantibus, tubulo erecto tenuissimo breviore, seta singula ex tubulo orta. Diam. cellular.

0·0084 millim. Hab. in *Spirogyra* insigni et in *Œdogoniis*; in speciminibus paucis observatum.

Hoc *Olpidium* aliqua similitudine consentit cum *Chytridio caudato* in *Schizosiphonte Kerguelensi* (ab Insula Kerguelensi) crescente, sed differt cellulis regulariter sphæricis paulo majoribus, collo cellulæ longiore, seta cytiodermatis crassiore. Possidere propinquitatem genericam plantulam Kerguelensem cum plantula Africana certe affirmare non possum.

Characium coronatum, spec. nov. *C.* cellulis (ante zoogonidiis egressis) oblongo-ellipticis basi angustissime attenuata, apice subito in tubulum brevem extrorsum radialiter dilatatum producto, cellulis post zoogonidiis egressis cyathiformibus. Longit. cellular. 0·0196–0·0224 millim., latit. cellular. 0·0041 millim. Hab. in *Œdogonio* in plantis aquaticis inter *Spirogyram*.

In a fountain at Government House.

Chlorochytrium, spec. Cellulæ intercellulares et intercellulares? sphæricæ in parenchymate plantarum aquaticarum (*Callitriche*) nidulantes, cytiodermate subtenui, cytioplasmate dense granuloso pallide viridi, ætate provectiore processus breviores aut singuli aut complures evoluti. Diam. cellular. 0·0168–0·0252 millim.

In a fountain at Government House.

? Chlorochytrium, spec. Cellulæ subcylindricæ cytiodermate tenui, cytioplasmate viridi granulis dense positis repleto. Longit. 0·195 millim., latit. 0·0504 millim. In parenchymate plantarum aquaticarum.

In a fountain at Government House.

Hæc cellula dubia tantummodo in specimine singulo observata mihi proxima videtur *Chlorochytrio*. Status delineatus cellulæ certissime est inexplicitus. Denique adjungam observationem de glyphis fungi in *Chroolepi* Montis Tabulæ filis crescentibus, quas ejusdem generis puto, cum glyphis erysibeis *Chroolepi* in 'Contributionibus' meis, p. 96, tab. v. (Fungi) fig. 3, delineatis et descriptis simul cum sporocarpio explicito. Glyphæ steriles circum circa *Chroolepi* fila procurrentes diametro paulo tenuiore speciminibus Europæis (in *Chroolepo* aureo a Monte Watzmann Bavariæ 6000 ped. et a Com. Tirol.).

DESCRIPTIO TABULÆ VI.

Fig. 1. *Scenedesmus aculeolatus*, Reinsch. Familia 4-cellularis, × $\frac{720}{1}$.

2. *S. aculeolatus*, cellula singula maxime aucta, × $\frac{1440}{1}$.

Fig. 3. *Cœlastrum verrucosum*, Reinsch. Familia sphærica ex cellulis 16 constituta.

4. *Cosmarium Hammeri*, Reinsch, var. Specimen majus, a fronte, $\times \frac{720}{1}$.
5. *C. abnorme*, Nordstedt. Specimen a fronte, $\times \frac{720}{1}$.
6. *C. abnorme*, var. *trigonum*, $\times \frac{720}{1}$. Aliud specimen, a vertice.
7. *C. punctulatum*, Brébisson. Specimen a fronte, $\times \frac{720}{1}$.
8. *C. pulcherrimum*, Nordst. Specimen a fronte, $\times \frac{720}{1}$.
9. *C. asperulum*, Reinsch. Specimen cum cytioplasmate, $\times \frac{720}{1}$.
10. *Cosmarium*, spec. nov. Specimen formæ minoris cellula in statu divisionis, $\times \frac{720}{1}$.
11. *Idem*. Specimen formæ majoris, $\times \frac{720}{1}$.
12. *Euastrum subincisum*, Reinsch. Cellula vacua, a fronte, $\times \frac{720}{1}$.
13. *Staurastrum margaritaceum*, Ehrenberg. Specimen, a fronte, $\times \frac{720}{1}$.
14. Aliud specimen, a vertice, $\times \frac{720}{1}$.
15. *S. exiguum*, Reinsch. Specimen a fronte, $\times \frac{720}{1}$.
16. Aliud specimen, a vertice, $\times \frac{720}{1}$.
17. *Zygnema tetraspermum*, Reinsch. Fila duo in statu secundo copulationis, zygosporæ modice evolutæ; cum cystiodermate distincto limitato simpliciter striato; limina cellularum copulatarum cystioplasmate perfecte vacua, $\times \frac{360}{1}$.
18. *Z. tetraspermum*. Ultimus status cellularum fili copulatione laterali zygosporis in lumine processuum copulativorum subevolutis cytiodermate distincto limitatis, $\times \frac{360}{1}$.
19. *Z. tetraspermum*. Fili sterilis pars, $\times \frac{360}{1}$.
20. *Z. tetraspermum*. Zygospora evoluta magis aucta, nucleis chlorophyllaceis sphæricis regulariter positis, $\times \frac{720}{1}$
21. *Lymnodictyon*, spec. nov., Reinsch. Specimen majus ex cellulis cytioplasmate repletis constitutum, $\times \frac{720}{1}$.

On the Peculiarities and Distribution of Rubiaceæ in Tropical Africa. By W. P. HIERN, M.A., F.L.S., &c.

[Read June 21, 1877.]

(PLATES VII. & VIII.)

PRELIMINARY REMARKS.

THE only general account of the Rubiaceæ of Tropical Africa that has hitherto appeared, professing to deal with the general bearings of the Order in this region and comparing the more remarkable points here with those in other parts of the world, is to be found in the fifth volume of the Memoirs of the Society of Natural History of Paris, from the pen of Mons. A. Richard. This is a memoir on Rubiaceæ, and contains a general description of the family for the whole world and the characters of the genera which compose it. The paper was read before the Royal Academy of Sciences of Paris on July 7, 1829, and was printed in the year 1829 or not later than 1830, but was not actually published until the year 1834; on pages 116–118 he gives a special account of the geographical distribution and general characters with the predominant genera of Rubiaceæ in the middle or intertropical region of Africa. Only a small proportion, however, of the species which are now known to occur in Tropical Africa appear to have been known to Richard. The genera of Rubiaceæ, as well for Tropical Africa as for the rest of the world, have been latterly set in order and described in the first part of the second volume of Bentham and Hooker's 'Genera Plantarum,' published in the year 1873. The new genera, described for the first time therein, have been all credited to Sir J. D. Hooker, with the exception of two genera, which have been taken up from Welwitsch's manuscripts. This work has been for the most part followed by me for the purposes of classification; the few departures that I have felt obliged to make from this main guide to the Order are not necessary to detail in this place.

Having recently drawn up descriptions of the plants of this Order for the third volume of the 'Flora of Tropical Africa,' this portion of the volume having already been printed off, I propose to lay before the Society a general sketch of the principal results, and to give at the same time some particulars which the plan of the 'Flora' does neither require nor allow.

There are described in the 'Flora' 478 species arranged under 80 genera, besides a species of *Vaillantia* and a few species which are either imperfectly known or only incidentally mentioned. To this number must also be added one old and two new species (which are herein described and figured), but which I was not acquainted with in time to include them in the volume, and also a considerable number of new species collected by Welwitsch in Lower Guinea, most of which, though seen by me, it has been found impossible to include. When these additions have been made, it will result that the species of Rubiaceæ already in our collections amount to no less a number than 550. The materials that have served for the base of my investigations as illustrative of and supplementary to the information derivable from botanical books, were the herbaria of Kew and of the British Museum, the collection of Afzelius, made at Sierra Leone and belonging to the University of Upsala, and the greater part of the Rubiaceæ collected by Dr. Peters in Mozambique, kindly lent from the Berlin herbarium for the purpose of the 'Flora.' The specimens available from these sources are the results of the labours of above a hundred collectors, and the sum of the number of species gathered by each of the collectors amounts to above thirteen hundred. The largest number of species collected by any one person is 175, that is, $\frac{7}{22}$ of the whole number of species hitherto known to occur in Tropical Africa, all of these species having been obtained in Upper Guinea by Gustav Mann.

On comparing the number of species belonging to Rubiaceæ with the numbers already ascertained to belong to other large natural Orders, it appears that in Tropical Africa Rubiaceæ is the Order of flowering plants second in size, it being rather more numerous in species than Compositæ and exceeded only by Leguminosæ. It must, however, be borne in mind that when the specimens of Compositæ gathered by Welwitsch in Angola have been determined, they will perhaps augment the number of species of the latter Order so as to outnumber Rubiaceæ. At the same time, from my acquaintance with these natural Orders in Tropical Africa, I should expect that the results of future collections to be made in this region will be likely to add more species to Rubiaceæ than to Compositæ; indeed this expectation is confirmed by the fact that three additional species of Rubiaceæ require to be included in these pages, whereas I should at this time have not even one such species to add if I were writing similar notes on Compositæ. The variations evidenced in the organs of our Rubiaceæ are very numerous, and though often by no means conspicuous, yet are dependent on such characters that it seems impossible to disregard their specific importance; and in this manner the number of species, many of them apparently quite local, is quickly increased. Dr. Schweinfurth, in his book of travels in the interior of Africa, speaks of "the endless varieties of the Rubiaceæ" (vol. i. p. 506, English edition), and there is no doubt but that many more species remain to be discovered in that country.

The number of Gramineæ in Tropical Africa has not been ascertained, and is difficult to estimate, but I believe that it will not exceed that of Rubiaceæ.

GENERAL GEOGRAPHICAL DISTRIBUTION OF RUBIACEÆ.

On comparing the number of species of Rubiaceæ in Tropical Africa with that in other important or isolated regions, the following interesting summaries and estimates may be given.

We find that in the Cape Flora there are about 106 species; see Harv. & Sond. Fl. Cap. vol. iii. (1864–1865). In the 'Flora Orientalis' there are about 182 species; see Boiss. Fl.Orient.vol. iii. (1875). In Algeria, Mumby gives in his 'Catalogus' (1859) 39 species, which include 21 species of the critical genus *Galium.*

In Spain, Wilkomm and Lange (1870) give 78 species, of which 53 are *Galia*; in Britain there are 14–17 species, of which 10–13 are *Galia*; and in the whole of Europe 171 species (Nyman, 1865), 110 being *Galia* and 43 *Asperulæ.*

In the Deccan peninsula of India, Wight and Arnott (1834) give 155 species, including some obscure or doubtfully native species; in Ceylon, Dr. Thwaites (1864) gives 129 species.

In British India it may be estimated that there are about 550 species.

In Dutch India it appears that there are also about 550 species.

In Australia, Mr. Bentham (1866) gives 110 species.

In New Zealand, Sir J. D. Hooker gives (1864) 31 species, 24 belonging to the genus *Coprosma.*

In the British West Indies, Grisebach (1864) gives 173 species.

In Brazil there may be estimated about 1100–1200 species; for this estimate I am indebted to Dr. Müller, of Geneva, who is at present engaged upon part of the Order for the 'Flora Brasiliensis.'

In Mauritius and the Seychelles, where *Filices* have more than double the number of species as compared with any Natural Order of Flowering Plants, Rubiaceæ occupies the fourth place among the latter, while Compositæ holds the sixth place. In the Seychelles, out of 60 (the total number of endemic genera), 14 belong to Rubiaceæ.

There is, of course, great probability that the standard of specific value varies much in the different books from which, and with the different authors from whom, the above numbers are taken, and therefore any conclusions deduced from their comparison must be held subject to this consideration. In my own work the standard has been intended to be kept high, so that plants have been regarded as conspecific unless some good botanical character or marked difference in general aspect fairly separated them; it is quite possible that some of my species will subsequently require division, and, on the other hand, when fuller material is available, some of my specific distinctions will perhaps be found to be bridged over.

Organic Peculiarities.

In order that it may be easy to form an opinion as to the comparative value of the various characters, I here give a general view of the more conspicuous differences which Tropical African Rubiaceæ, whether in the tribes, genera, or species, present in each of the organs and in some of the morphological or physiological conditions.

1. *As to the Flowers.*

The flowers, at least within our geographical range, with the sole exception of the common Levant weed *Vaillantia hispida*, appear to be uniformly hermaphrodite; even though the genus *Psychotria* has, in the New World, some species with polygamo-diœcious flowers, none of our species possess this peculiarity.

2. *Frequency of Dimorphism.*

Dimorphism occurs commonly or at least in some species in the genera *Pentas*, *Virecta*, *Otomeria*, and *Dirichletia*, all of which belong to the tribe Hedyotideæ, also in *Pentanisia*; perhaps a like condition exists in some species of *Tricalysia* and probably also in other genera.

3. *Differences in the Pistil.*

The ovary is usually 2-celled, but in many genera deviations, either occasional or characteristic, occur; it is only 1-celled in *Gardenia*, but incomplete partitions are found in this genus, due to the production of 2 or more parietal placentas; it is also sometimes 1-celled in *Mitriostigma*, *Amaralia*, *Pouchetia*, *Lamprothamnus*, and *Rubia*.

The ovary is 2–3-celled in *Siphomeris* and in one species of *Rutidea*, and by exception the same increase in the usual number of cells is said to occur in *Pentas*, *Tricalysia*, and *Pentanisia*, and it is 2–4-celled in *Cephaëlis*. It is 3-celled in *Richardia*, 4-celled in *Morelia* and *Morinda*, and very rarely so in one species of *Pavetta*, 3–5-celled in *Stipularia*, *Vangueria*, *Fadogia*, and *Cuviera*, 4–5-celled in *Urophyllum* and *Sabicea*, 5-celled in *Temnopteryx*, *Pentaloncha*, and *Ancylanthos*, 5–7-celled in *Triainolepis*, 10–12-

celled in *Lasianthus*. The number of lobes or teeth of the style or stigma usually agrees with the number of cells, whether complete or incomplete, in the ovary. The style is usually of moderate length, that is, about as along as the corolla or shortly exserted; and the upper or stigmatic portion is usually oblong, fusiform, linear, clavate, or often subcapitate. There, are, however, globose, mitriform, or calyptriform stigmas in *Canthium*, *Vangueria*, *Fadogia*, *Cuviera*, and *Ancylanthos*, and they are much dilated in *Macrosphyra* and in one doubtful species of *Oxyanthus*; and the style is far exserted in *Tarenna*, *Macrosphyra*, and *Pavetta*.

The ovules are numerous or several (2 or more) in each cell of the ovary throughout the first great series of the Order, comprising half the number of our genera, while in the other series, comprising the remaining half of the genera, the ovules are always solitary. Their insertion varies considerably in different genera, and is important for the purposes of classification. They are pendulous in the genera *Adina*, *Zygoon*, *Galiniera*, and *Guettarda*, and in the tribes Alberteæ and Vanguerieæ. They are ascending in the genera *Uncaria*, *Hymenodictyon*, *Corynanthe*, and *Hekistocarpa*, and in the tribe Galieæ, while they are erect in the genera *Morinda*, *Siphomeris*, and *Anthospermum*, as well as in the tribe Psychotrieæ. They are peltately attached in the genera *Crossopteryx*, *Dictyandra*, *Leptactina*, *Tarenna*, and *Mitracarpum*, as well as in nearly the whole of the tribe Ixoreæ. The ovules are anatropous in most of the genera, but are amphitropous in the tribes Ixoreæ (except *Morinda*) and Spermacoceæ and in the genus *Rubia*.

The placentas are fleshy in several genera of the tribes Mussændeæ and Gardenieæ, and the ovules are immersed in or impressed on them in *Randia*, *Amaralia*, &c. The disk at the top of the ovary is not usually important in its characters; it varies from the form of an elevated hemisphere, sometimes lobed, to a mere ring, which is sometimes almost obsolete; in *Virecta multiflora* the disk consists of two narrow cones.

4. *Differences in the Fruit.*

Corresponding with numerous, several, or solitary ovules in the ovary, so the fruit has numerous, several, few, or solitary seeds; the number of seeds, however, is often far fewer than that of the ovules, and occasionally, as, for instance, in *Oxyanthus macrophyllus*, we find solitary seeds to result in the fruit after numerous ovules in the flower. Monospermous fruits are also common in the case of the genera with 2-celled and solitary-ovuled ovaries.

The fruit is a syncarpium in *Sarcocephalus* and *Morinda*, baccate and indehiscent in the tribes Mussændeæ, Hamelieæ, and Gardenieæ. It separates into cocci in *Mitragyne*, *Dirichletia*, *Siphomeris*, and Spermacoceæ. It consists of pyrenes in the tribes Guettardeæ, Vanguerieæ, Ixoreæ, and Psychotrieæ; and it is capsular in the tribes Cinchoneæ and Hedyotideæ and in some genera of Naucleeæ, being septicidal in the genera *Adina*, *Uncaria*, *Otomeria*, and *Hekistocarpa*, and loculicidal in *Hymenodictyon*, *Corynanthe*, *Crossopteryx*, *Pentas*, and *Virecta*; it bursts irregularly at the apex in *Argostemma*, and dehisces variously in *Oldenlandia*. In the genus *Virecta* one valve of the capsule is deciduous, whilst the other valve is persistent.

The fruit splits up from the base in *Siphomeris* and *Hypodematium*; the latter genus differs only by this peculiarity from *Spermacoce*, the fruit of which is dicoccous, splitting down the middle from the apex. In the genus *Siphomeris* the epicarp is membranous and bursts in a valvate manner from the base, and each of the compressed pyrenes hangs from the apex of a filiform exterior column, and the general appearance of the fruit much resembles that of Umbelliferæ.

In *Guettarda* the endocarp is very hard and woody and more or less lobed; in *Triainolepis* the pyrenes are bony.

The form of the fruit is commonly globular; it is pisiform in several genera of Mussændeæ, Gardenieæ, and Ixoreæ; it is large in *Amaralia* and some species of *Randia* and *Gardenia*, fusiform or pyriform in *Macrosphyra* and in some species of *Oxyanthus* and *Mitriostigma*. It is more or less didymous or dimidiate in *Canthium* and *Mitracarpum* and in the tribe Galieæ.

The fruit is more or less ribbed longitudinally in the genera *Pentas*, *Otomeria*, *Dirichletia*, *Mussænda*, *Bertiera*, *Oxyanthus*, many species of *Psychotria*, and *Cephaëlis*.

The seeds usually afford valuable characters for the determination of genera, but not so good for the higher divisions of the Order. In *Oldenlandia Peltospermum*, however, the seeds are orbicular and discoid, whereas in the other species of the genus they are angular. The seeds are furnished at both ends with wings (being extensions of the testa) in the genera *Adina*, *Mitragyne*, and *Uncaria*, and in the tribe Cinchoneæ; in *Uncaria* the wings are produced as capillary appendages, in *Hymenodictyon* and *Corynanthe* the wings are undivided at one end and bipartite at the other, while in *Crossopteryx* the peltate seeds have cut membranous wings. Numerous small angular seeds occur in *Pentas*, *Virecta*, and *Otomeria*, and in the tribe Hamelieæ; they are more usually globose in Mussændeæ and Gardenieæ, but the exceptions are too frequent for this distinction to be taken alone for a diagnostic character.

The seeds are convex on the back and concave with a central depression on the face in the genera *Ixora* and *Pavetta*; they are marked on the face with a longitudinal furrow, which is entered by the placenta, in *Coffea*. In *Psychotria* they are in most cases longitudinally ribbed or furrowed on the back, and they are marked on the ventral face with a diagonally placed depressed cross in the genus *Mitracarpum*.

A small aril occurs only in the genus *Galiniera*.

The testa is more or less fibrous or fibrous-sulcate in the genera *Oxyanthus*, *Mitriostigma*, *Pouchetia*, and *Polysphæria*.

Albumen is always present in the seeds except in the case of the genus *Guettarda*; it is usually uniform, but is distinctly ruminated in the genera *Enterospermum*, *Galiniera*, *Polysphæria*, *Rutidea*, and *Grumilea*.

5. *Differences in the Andrœcium.*

There is very little variation in the structure of the andrœcium in Rubiaceæ; the typical form of the anthers is oblong or linear, and though a few genera, especially in the tribes Naucleeæ and Spermacoceæ, exhibit a more ovate or lanceolate or shortly oblong form, yet as this matter is one that is seen only by degrees, it does not afford good distinguishing characters; in the tribe Galieæ, especially in the genus *Galium*, however, the anthers are short.

In the genus *Argostemma* the anthers are connivent and dehisce by lateral pores at the apex. In *Dictyandra* the cells of the anthers are divided into small compartments by a few longitudinal and by many transverse septa, and are therefore termed locellate.

In several species of *Tricalysia* the connective is produced beyond the anther-cells into apiculate appendages; in our species of the genus *Gaillonia* two of the anthers are subsessile, while the remaining anthers are furnished with short but distinct filaments. In *Spermacoce* the number of stamens is rarely reduced to 3 or even to 2.

6. *Differences in the Corolla.*

The corolla is regular, or very nearly so, in all of our species;

it varies in form from rotate, as in *Argostemma*, to long, slender, and narrowly salver-shaped, as in *Oxyanthus*; it is subrotate in *Rhabdostigma* and *Cuviera*, and rather less so, having a short funnel-shaped tube, in *Lamprothamnus*; it is calyptriform in *Cephaëlis clausa*. The tube is curved in some species of *Psychotria*, especially in the section Chasalia. The lobes are crisped in *Heinsia jasminiflora*, caudate-acuminate in some species of *Canthium*, *Vangueria*, and *Cuviera*, and each lobe is furnished at the apex with a quasi-dorsal horn in some species of *Fadogia* and *Psychotria*, and with an elongated club-shaped appendix at the back near the apex in *Corynanthe*. The lobes are reduced to 3 in number in a few species of *Spermacoce*. The æstivation is valvate in the genera *Adina*, *Mitragyne*, *Uncaria*, *Hymenodictyon*, and *Corynanthe*, and in the tribes Hedyotideæ, Mussændeæ, Vanguerieæ, Morindeæ, Psychotrieæ, Pæderieæ, Anthospermeæ, and Galieæ; it is reduplicative-valvate in *Hekistocarpa*, and induplicate-valvate in *Trichostachys*; it is imbricate in the genera *Sarcocephalus*, *Heinsia*, and doubtfully so in *Lepipogon*; and it is dextrosely contorted, as seen from the axis of the flower, in the genera *Crossopteryx* and *Bertiera*, and in the tribes Gardenieæ, Alberteæ, and Ixoreæ.

7. *Differences in the Calyx.*

There is perhaps greater variation in the calyx than in any other organ; and the calyx furnishes good characters in some cases for the discrimination of genera, but more usually for that of species; it is, however, of but little value for higher groups.

The tubes of the contiguous calyces cohere in the genus *Sarcocephalus*, and become confluent in fruit in *Morinda*. In all the genera the calyx is inferior; but in many the tube is extended above the ovary. The tube is ribbed, at least in fruit, in *Pentas*, *Otomeria*, and some other genera; more or less compressed in *Stipularia*, &c.

The limb is developed into a large, dilated, oblique, reticulated lamina in *Dirichletia*; it is unequally lobed in *Pentas*, *Virecta*, *Otomeria*, *Temnopteryx*, *Stipularia*, *Pentanisia*, *Anthospermum*, *Gaillonia*, and in some species of *Spermacoce*. One lobe is frequently much enlarged as a conspicuous coloured lamina in *Mussænda*; in one species of *Sarcocephalus* there is a filiform clavate appendage between the several calyx-teeth, which is soon torn up from its attachment as the corolla grows to its full length. The limb is furnished inside at the base with some fleshy setæ in the genera *Dictyandra* and *Leptactina*; in some species of *Tricalysia* it is split down two opposite sides; and in a species of each of the genera *Randia* and *Cephaëlis* the limb is spathaceous. The lobes are more or less accrescent or foliaceous in *Temnocalyx*, *Pentaloncha*, *Heinsia*, *Dictyandra*, *Leptactina*, *Amaralia*, *Pentanisia*, *Cuviera*, *Anthospermum*, and *Gaillonia*, and in some species of the genera *Randia*, *Gardenia*, *Fadogia*, and *Psilanthus*. The limb of the calyx is, in some genera, reduced to little more than a slightly lobed ring.

The æstivation of the calyx is various, but most frequently open; the principal exceptions are as follows:—In the genus *Lamprothamnus* and in a species of *Pavetta* the calyx-lobes are imbricated in æstivation; in the latter case, however, they are occasionally contorted. The æstivation is contorted in the same direction as in the corolla (homotropous) in the genera *Dictyandra*, *Leptactina*, and in two species of the genus *Tarenna* (*T. nitidula*, var. *Afzelii*, and *T. congensis*); it is contorted in the reverse direction (heterotropous) in the genus *Amaralia*.

8. *Differences in the Inflorescence and Bracts.*

There is considerable variation in the inflorescence. The primary division of the tribe Gardenieæ depends upon the nature of the inflorescence, that is to say, whether it is terminal or axillary; among the former division of the tribe, however, are some genera with the inflorescence terminating in abbreviated, lateral branches. Again, the genera of the tribe Mussændeæ are classified on the same principle; and one genus of this latter tribe is remarkable for having its inflorescence enclosed in one or two campanulate or connate bracts. The tribe Naucleeæ is characterized by flowers confluent or collected in compact heads; and some of the genera of this tribe are mutually distinguished by the presence or absence of paleaceous bracteoles between the several flowers. The structure of the inflorescence also determines to a great extent the classification of the genera of the tribe Psychotrieæ; and involucrate flowers occur in two of the genera of this tribe.

The inflorescence is corymbose in numerous genera; it is capitate in several, as, for instance, in addition to those already alluded to, *Sabicea*, *Cephaëlis*, *Trichostachys*, *Spermacoce*, *Hypodematium*, *Octodon*, *Richardia*, and *Mitracarpum*, as well as in a section of *Psychotria* and in certain species of other genera; in *Rutidea* the capitula are arranged in brachiate terminal panicles; it is spicate in *Hymenodictyon*, *Otomeria*, *Gaillonia*, and in some species of *Bertiera* (in one species of the last genus the spikes are scorpioid); it is fasciculate or clustered in the axils of the leaves in *Temnopteryx*, *Pentaloncha*, *Morelia*, *Lasianthus*, and other genera; and solitary flowers occur in some species of *Randia*, *Gardenia*, *Psilanthus*, *Anthospermum*, and *Diodia*.

Precocious flowers occur in *Zygoon*, *Feretia*, and occasionally in *Tricalysia*. In many genera the flowers are small and inconspicuous, as in *Oldenlandia*, *Hekistocarpa*, *Pauridiantha*, most species of *Spermacoce*, &c.; but large and handsome flowers occur in *Mussænda*, *Heinsia*, *Dictyandra*, *Leptactina*, *Randia* (§ *Euclinia*), *Gardenia*, *Oxyanthus*, *Amaralia*, *Ixora*, *Pavetta*, and *Coffea*.

Tetramerous and pentamerous flowers are by far the commonest, but hexamerous flowers are by no means uncommon in certain genera, as, for instance, *Tricalysia* and *Coffea*; octomerous flowers occur in one species of *Randia*, and as many as eleven divisions in the corolla occur in one species of *Gardenia*. The flowers are fragrant in many species, as, for example, in *Gardenia*, *Crossopteryx*, &c.; an opposite condition, in which the flowers have a very disagreeable smell, occurs in *Canthium fœtidum*. The colour of the flower is various, and white flowers are not at all rare.

The bracts are involucrate in *Sabicea*, *Stipularia*, and *Cephaëlis*; in *Hymenodictyon* they are foliaceous, reticulated, marcescent, and long-stalked, and form a very conspicuous addition to the flowers. The bracteoles are connate at the base and become calyculate in *Tricalysia*, *Polysphæria*, *Lamprothamnus* and *Coffea*; one lobe of the epicalyx often becoming foliaceous in one species of *Tricalysia*. Numerous filiform bracteoles surround the flowers in *Octodon*; and bracteoles are altogether absent from *Galium*. The position of the bracteoles in *Pavetta* is useful in separating this genus from its near ally *Ixora*.

9. *Differences in the Leaves and Stipules.*

The variation in the foliage is limited by the condition that the leaves are uniformly opposite or verticillate and quite entire; the only exception within the range of our flora that has come under notice is that a barren shoot of *Randia malleifera* (Schweinfurth, no. 1877) had alternate leaves. In the majority of genera the leaves are opposite; in some cases the internode between contiguous pairs of opposite leaves is so abbreviated as to give the appearance of quaternate leaves; examples of this occur in *Argostemma* and in *Vangueria tetraphylla*. Ternate leaves occur rarely in *Sarcocephalus Russeggeri* and *Randia*, more frequently in *Gardenia*, and regularly so in *Pavetta ternifolia*. Quaternate leaves occur in our species of *Adina* and in some species of *Gardenia*; and there are whorls of three to five leaves in the genus *Fadogia.* Leaves, more rounded in figure and smaller in size than the rest of the leaves on the plant, occur at the base of the branches in the genera *Cremaspora* and *Polysphæria.* A few species, especially in the genus *Psychotria*, have punctate leaves.

The stipules are either persistent or deciduous; they are undivided in the majority of genera, and are often connate at the base, so as to be intrapetiolar; they are geminate in some species of *Mussænda* and in two out of the three species of *Heinsia*; they are 2–4-cuspidate in some species of *Oldenlandia*, *Psychotria*, and *Anthospermum*, and in *Triainolepis*; they are 2–∞-setose in *Virecta setigera*, in *Otomeria*, *Dirichletia*, in some species of *Oldenlandia* and in *Diodia*, *Spermacoce*, *Octodon*, and *Gaillonia*; they are multipartite in *Pentas*, and multifid in *Temnopteryx.* The stipules are glumaceous in *Leptactina senegambica*, *Randia macrantha*, and *Macrosphyra*; and they sheathe the stem in *Trichostachys vaginalis.* In the tribe Galieæ either the stipules are to be considered foliaceous and like the leaves, or the leaves are to be regarded as verticillate and the stipules as wanting.

10. *Differences in Habit and Stature.*

Except the tribe Galieæ, which is but sparingly represented in Tropical Africa, and except also the tribe Spermacoceæ, the prevailing habit of Rubiaceæ consists of shrubs, often small, sometimes scandent, and occasionally arborescent. The tribe of Hedyotideæ, however, is made up almost wholly of herbs, though some species of *Pentas* and the genus *Dirichletia* are undershrubs or more or less bushy. Moreover the genera *Temnopteryx*, *Pentaloncha*, and *Geophila* consist of herbs, the last-named genus consisting of small, slender, creeping, rooting plants.

Several genera and species are climbing-shrubs, as *Rutidea*, *Siphomeris*, *Sabicea*, &c., and a few are spinous, as *Uncaria*, *Randia dumetorum*, some species of *Canthium*, and some states of *Gardenia Thunbergia.* *Anthospermum* is heath-like, and *Morelia* sometimes produces aërial roots.

A few species constitute trees, such as the species of *Belonophora*, *Mitragyne*, *Corynanthe*, &c. Dr. Schweinfurth remarks that in Niamniam-land the large, slim-stemmed Rubiaceæ, by their regularity of growth and symmetry of leaf, appear to imitate and, in a measure, supply the absence of arborescent ferns.

Clinging prickles occur only in some species of Galieæ.

ECONOMIC AND SUPERSTITIOUS USES.

Edible fruits are supplied by the genus *Sarcocephalus* and by species of *Vangueria* and *Oxyanthus*. *Sarcocephalus Russeggeri* produces a gum; and, according to Dr. Schweinfurth, from the wood of the latter plant, which is called "damma," little four-legged stools are made and employed in Niamniam-land on occasions when the augury is consulted.

According to a note of Afzelius, the bark of *Canthium Afzelianum* is employed at Sierra Leone in the case of swelled legs. The bark of *Crossopteryx* is employed as a febrifuge; for an account of the medicinal virtues of this plant, see Winterbottom, 'Account of Sierra Leone,' vol. ii. pp. 45, 46, 243–253 (1803).

In Niamniam-land and Monbuttu-land, and in other interior parts of Africa explored by Schweinfurth, the sap of *Randia malleifera*, locally called "blippo," is employed to dye the human body with black marks in stripes or elaborate patterns. A red dye is derived from *Urophyllum rubens* by the natives in the island of Fernando Po; and madder, *Rubia tinctorum*, is cultivated in Abyssinia for economic purposes.

A resinous secretion issues from *Gardenia resiniflua*. The wood of *Mitragyne africana* is good for carving, and in the country of the Niger is used for writing-tablets. The timber is good of *Corynanthe* and *Gardenia Jovis-tonantis*. Lances in Bongo-land are made from *Randia dumetorum*, the wood of which is very hard, so much so that it has been designated by the name of ebony: see the figure given in Petherick's 'Travels in Central Africa,' vol. i. p. 164 (1869). The last-named species and *Morelia* are said to be used as fish-poisons. *Gardenia Thunbergia* forms capital fences, which are sufficient to resist the inroads of elephants, according to Colonel Grant; and a decoction of its root, boiled in *Sorghum* flour, is used by the native doctors at Madi to cure hæmaturia.

The following note with regard to *Gardenia Jovis-tonantis* is taken from Welwitsch, 'Apontamentos,' p. 579 (1859). This little tree enjoys a great reputation among the natives of Angola because it is regarded as a preventive against thunderbolts; and they usually, on this account, put branches of it on the top of their dwellings. The name which the natives give to it is "*N-day*" or "*Unday*;" and its wood, which borders a little upon yellow, is of a very fine grain, very compact, heavy, and of extraordinary strength; and it is perhaps on account of the latter quality that the Negroes attribute to it the preventive virtue referred to. It rarely exceeds 7 or, at the most, 9 feet in height; its trunk, however, comes up to 1½–2 feet in circumference, offering thus sufficient diameter to render this precious wood useful for all works of turnery, such as in Europe are usually made with boxwood. Dr. Welwitsch further explains that this plant is remarkable for the large number of lobes into which the various parts of the flower are divided; and on this account he proposed the generic name *Decameria*; the specific name *Jovis-tonantis* he selected in allusion to the supposed influence in time of thunder.

Mungo Park, in his 'Travels in the Interior Districts of Africa,' has the following passage:—"On the first attack of a fever, when the patient complains of a cold, he is frequently placed in a sort of vapour-bath. This is done by spreading branches of the *Nauclea orientalis* upon hot wood embers, and laying the patient upon them wrapped up in a large cotton cloth. Water is then sprinkled upon the branches, which, descending to the hot embers, soon covers the patient with a cloud of vapour, in which he is allowed to remain until the embers are almost extinguished. This practice commonly produces a profuse perspiration, and wonderfully relieves the sufferer."

Nauclea orientalis is a name which has been long known to science as an East-Indian plant, but which unfortunately had, even by Mungo Park's time, been employed to designate two different species which now are placed in two different genera, neither of which is *Nauclea*, though both belong to the tribe Naucleeæ. It is therefore uncertain what species or genus Mungo Park took his plant to be; but it is nearly certain that he was treating of either *Sarcocephalus esculentus* or *Mitragyne africana*: and inasmuch as I have seen a specimen of the former species collected by Mungo Park and now in the department of botany at the British Museum, and as I have seen no such specimen of the latter species, I conclude that it is most likely that *Sarcocephalus esculentus* afforded the febrifuge spoken of by Mungo Park. The medicinal qualities of this same species are alluded to by T. Winterbottom in his 'Account of the Native Africans in the Neighbourhood of Sierra Leone,' vol. ii. p. 45, under the name of *Nauclea sambucina*.

Coffee * is indigenous, as well as cultivated, in Tropical Africa; *Coffea arabica* is native in Abyssinia, and, according to Welwitsch, in Angola. Colonel Grant (Trans. Linn. Soc. Lond. xxix. p. 87) states that near the Victoria Nyanza lake at Witchroo it grows wild and certainly never introduced; he adds that the inhabitants do not use the berry in decoction, but chew the undeveloped beans to soothe and allay hunger and thirst: he saw it in flower and fruit; but as specimens do not exist in his collection, I think that some little doubt must remain as to the scientific determination of the plant. Other species produce coffee, as *C. liberica* (Liberian coffee), *C. stenophylla* (the highland coffee of Sierra Leone), *C. racemosa*, and others; also *Feretia apodanthera* in Abyssinia, a species of *Tricalysia* in Angola, and *Randia genipæflora* (the wild coffee of Fernando Po) produce fruits which can be used as substitutes for coffee.

NEW SPECIES OF AFRICAN RUBIACEÆ.

The two following species, of which I now add technical characters, are recent additions of material to the Rubiaceæ of Tropical Africa.

PENTAS PARVIFOLIA, *Hiern*, sp. n. Herba suffruticosa puberula ramis sulcato-striatis, foliis lineari-ovalibus vel lanceolatis oppositis vel (ramulis abbreviatis lateralibus efformatis) fasciculato-approximatis,apice vel obtusis vel subacutis vel mucronulatis, basi in petiolum brevem attenuatis, $\frac{1}{2}$–$\frac{3}{4}$-pollicaribus, subtus subpallidioribus, margine anguste revolutis, venis lateralibus utrinsecus 3-4 inconspicuis, stipulis e basi brevi truncata 3 2-setoso-cuspidatis, floribus pentameris $\frac{2}{3}$-pollicaribus subsessilibus in densas pedunculatas vel subsessiles terminales cymas aggregatis, calycis longo lobo ovali-oblongo foliaceo $\frac{1}{6}$–$\frac{1}{5}$-pollicari, parvis lobis subulatis, corollæ tubo apice subinfundibulari gracili faucibus barbatis, antheris inclusis, stylo exserto gracili apice bilobo, fructibus $\frac{1}{6}$-pollicaribus.

Habitat in insula "Mombassa" dicta ad Africæ oram Zanguebaricam; specimina a cl. J. M. Hildebrandt, no. 1994, mense Martio, anni 1876, lecta et in herbario Musei Britannici a me visa. (*Vide* Tab. VII.)

This differs from all previously known species of *Pentas* by the narrow shape and small size of the leaves.

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* For further remarks on this subject, see my paper "On the African Species of the Genus *Coffea*, Linn.," Trans. Linn. Soc. Bot. (ser. 2), vol. i. pp. 169–176.

TRICHOSTACHYS VAGINALIS, *Hiern*, sp. n. *T.* reptans, caulis apice vel ramulis pubentibus, foliis ovalibus apice cuspidato-acuminatis basi obtuse angustatis petiolatis utrinque pilis crispis sparsis subtus subpallidioribus 3½–4 pollices longis 2–2¼ pollices latis, venis lateralibus utrinsecus 7–8 gracilibus, petiolo pubente ⅔–¾ poll., stipulis ½–⅗ poll. bifidis, inferne connato-vaginantibus apice caudato-acuminatis extus pubentibus, floribus albidis pentameris ⅜ poll. subsessilibus in capitula hemisphærica pollicaria dense aggregatis, pedunculo communi pollicari stipulaceo-bracteatis, bracteolis inter flores linearibus ciliatis calyces subæquantibus, calyce ¼ poll. limbo profunde lobato pubente lobis lineari-lanceolatis ⅛–⅙ poll., corollæ tubo cylindrico faucibus dense barbatis lobis patentibus ⅛ poll. apice mucronato-cornutis, antheris exsertis glabris lineari-oblongis filamenta subæquantibus, disco globoso elevato.

Habitat in Guinea ad Mopanga (Cameroons): legit Kalbreyer, n. 153, alt. 2600 ped., die 30 mensis Martii anni 1877.

Herba 8–12-pollicaris in fruticum umbra crescens. (*Vide* Tab. VIII.)

TABULAR VIEW OF TROPICAL AFRICAN RUBIACEÆ.

The subjoined is a systematic list of the tribes, genera, and species of Rubiaceæ in Tropical Africa, with the distribution of the species in the six districts into which the geographical region is divided, and with the geographical range of the species which extend beyond.

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
ribe I. **Naucleeæ.**							
ARCOCEPHALUS, *Afz.*							
S. esculentus, *Afz.*	*						
S. Russeggeri, *Ky.*	……	*	*				
DINA, *Salisb.*							
A. microcephala, *Hn.*	……	……	*				
MITRAGYNE, *Korth.*							
M. africana, *Korth.*	*	……	*				
M. macrophylla, *Hn.*	*	……	*	*			
NCARIA, *Schreb.*							
U. africana, *G. Don*	*	*	……	……	……	……	? Comoro Islands.
ibe II. **Cinchoneæ.**							
YMENODICTYON, *Wall.*							
H. Kurria, *Hochst.*	……	……	*	*			
H. biafranum, *Hn.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
6. CORYNANTHE, *Welw.*							
1. C. paniculata, *Welw.*				*			
7. CROSSOPTERYX, *Fenzl.*							
1. C. Kotschyana, *Fenzl.*	*		*	*		*	
Tribe III. **Hedyotideæ.**							
8. ARGOSTEMMA, *Wall.*							
1. A. pumilum, *Benn.*	*						? Nipal, North-west Himalayas, to Burmah, an mountains of the Decca peninsula of India.
9. PENTAS, *Bth.*							
1. P. Schimperiana, *Vatke.*			*				
2. P. occidentalis, *B. et H.f.*	*						
3. P. carnea, *Bth.*			*	*		*	Tropical Arabia and Comor Islands.
4. P. purpurea, *Oliv.*			*			*	
5. P. arvensis, *Hn.*			*				
6. P. parviflora, *Bth.*	*						
10. VIRECTA, *Afz.*							
1. V. multiflora, *Sm.*	*			??			
2. V. procumbens, *Sm.*	*			*			
3. V. angustifolia, *Hn.*	*						
4. V. setigera, *Hn.*	*						
11. OTOMERIA, *Bth.*							
1. O. guineensis, *Bth.*	*						
2. O. madiensis, *Oliv.*		*	*				
3. O. dilatata, *Hn.*	*						
4. O. lanceolata, *Hn.*				*			
12. DIRICHLETIA, *Kl.*							
1. D. pubescens, *Kl.*						*	
2. D. glabra, *Kl.*						*	
3. D. glaucescens, *Hn.*			*				
13. OLDENLANDIA, *Plum.*							
1. O. peltospermum, *Hn.*	*						
2. O. Bojeri, *Hn.*					*	*	Madagascar and Comoro Islands.
3. O. globosa, *Hn.*			*				
4. O. decumbens, *Hn.*	*			*		*	Natal and Madagascar.
5. O. lasiocarpa, *Hn.*						*	
6. O. rigida, *Hn.*				*			
7. O. Schimperi, *T. And.*			*				Upper Egypt, Arabia, Sina Beloochistan, and Scind
8. O. obtusiloba, *Hn.*						*	
9. O. senegalensis, *Hn.*	*		*				
10. O. noctiflora, *Hn.*			*				
11. O. grandiflora, *Hn.*	*		*				
12. O. abyssinica, *Hn.*	*		*				
13. O. strumosa, *Hn.*			*				Cape de Verde, India an ? East India.
14. O. caffra, *E. et Z.*				*		*	Cape districts and Natal, also ? Madagascar.
15. O. virgata, *DC.*?	*					*	
16. O. effusa, *Oliv.*	*				*	*	
17. O. Heynei, *Miq.*	*		*				India, Natal, and ? Madagascar.
18. O. parviflora, *Oliv.*	*		*				
19. O. flosculosa, *Hn.*						*	
20. O. monanthos, *Hn.*			*				
21. O. cæspitosa, *Hn.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
13. OLDENLANDIA (*continued*).							
22. O. tenuissima, *Hn.*	......	......	......	......	*		
23. O. lancifolia, *Schwf.*	*	*	*				
24. O. corymbosa, *L.*	*	......	*	*	......	*	A common Tropical weed.
25. O. capensis, *L. f.*	*	......	*	......	......	*	Cape flora and Madagascar, Syria.
26. O. trinervia, *Retz.*	*	......	*	......	......	*	India, Madagascar, Mauritius, &c.
27. O. macrophylla, *DC.*	*	......	*	*	......	*	Natal, Seychelles, and Comoro Islands.
28. O. wauensis, *Hn.*	......	......	*				
29. O. hedyotoides, *Boiss.*	......	......	*	......	......	......	Upper Egypt and Armenia.
14. HEKISTOCARPA, *Hk. f.*							
1. H. minutiflora, *Hk. f.*	*						
Tribe IV. **Mussændeæ.**							
15. MUSSÆNDA, *Ray.*							
1. M. Afzelii, *G. Don*	*	......	......	*			
2. M. Isertiana, *DC.*	*						
3. M. polita, *Hn.*	*						
4. M. stenocarpa, *Hn.*	......	*					
5. M. arcuata, *Poir.*	*	......	*	*	......	*	Mauritius and Madagascar.
6. M. tenuiflora, *Bth.*	*						
7. M. erythrophylla, *S. et T.*	*	*	*	*			
8. M. elegans, *S. et T.*	*	*	......	*			
9. M.? heinsioides, *Hn.*	......	......	......	*			
10. M.? platyphylla, *Hn.*	......	*					
11. M. grandiflora, *Bth.*	*						
12. M. luteola, *Del.*	......	......	*				
16. PAURIDIANTHA, *Hk. f.*							
1. P. canthiifolia, *Hk. f.*	*						
17. UROPHYLLUM, *Wall.*							
1. U. hirtellum, *Bth.*	*						
2. U. callicarpoides, *Hn.*	*						
3. U. insulare, *Hn.*	*						
4. U. rubens, *Bth.*	*						
5. U. Afzelii, *Hn.*	*						
6. U. paucinerve, *Hn.*	*						
7. U. micranthum, *Hn.*	*						
8. U. viridiflorum, *Schwf.*	......	*					
18. SABICEA, *Aubl.*							
1. S. ferruginea, *Bth.*	*						
2. S. calycina, *Bth.*	*						
3. S. pilosa, *Hn.*	*						
4. S. Vogelii, *Bth.*	*						
5. S. capitellata, *Bth.*	*	......	......	*			
6. S. venosa, *Bth.*	*						
7. S.? segregata, *Hn.*	*						
8. S.? cauliflora, *Hn.*	*						
9. S.? geantha, *Hn.*	*						
19. TEMNOPTERYX, *Hk. f.*							
1. T. sericea, *Hk. f.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
20. PENTALONCHA, *Hk. f.*							
1. P. humilis, *Hk. f.*	*						
21. STIPULARIA, *Beauv.*							
1. S. africana, *Beauv.*	*						
2. S. elliptica, *Schwf.*	*		*				
3. S. gabonica, *Hn.*	*						
Tribe V. **Hamelieæ.**							
22. HEINSIA, *DC.*							
1. H. jasminiflora, *DC.*	*			*		*	
2. H. densiflora, *Hn.*						*	
3. H. benguelensis, *Welw.*				*			
23. BERTIERA, *Aubl.*							
1. B. æthiopica, *Hn.*			*				
2. B. subsessilis, *Hn.*	*						
3. B. montana, *Hn.*	*						
4. B. africana, *A. Rich.*	*						
5. B. macrocarpa, *Bth.*	*						
6. B. bracteolata, *Hn.*	*						
7. B. laxa, *Bth.*	*			*?			
8. B. breviflora, *Hn.*	*						
Tribe VI. **Gardenieæ.**							
24. DICTYANDRA, *Welw.*							
1. D. arborescens, *Welw.*	*			*			
2. D. involucrata, *Hn.*	*						
25. LEPTACTINA, *Hk. f.*							
1. L. Mannii, *Hk. f.*	*						
2. L. densiflora, *Hk. f.*	*						
3. L. senegambica, *Hk. f.*	*						
4. L. heinsioides, *Hn.*					*		
26. TARENNA, *Gærtn.*							
1. T. angolensis, *Hn.*				*			
2. T. mossambicensis, *Hn.*						*	
3. T. nilotica, *Hn.*			*				
4. T. conferta, *Hn.*	*						
5. T. nitidula, *Hn.*	*						
6. T. congensis, *Hn.*				*			
7. T. pallidula, *Hn.*	*						
8. T. tetramera, *Hn.*	*						
9. T. grandiflora, *Hn.*	*						
10. T. nigrescens, *Hn.*						*	
27. ENTEROSPERMUM, *Hn.*							
1. E. littorale, *Hn.*						*	? Inhambane.
28. RANDIA, *Houst.*							
1. R. dumetorum, *Lam.*			*			*	East Indies and Hongkong
2. R. acuminata, *Bth.*	*	*					
3. R. genipæflora, *DC.*	*						
4. R. rubens, *Hn.*	*						
5 R. pallens, *Hn.*	*						
6. R. gambica, *Hn.*	*						
7. R. ? caudata, *Hn.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
28. RANDIA (*continued.*)							
8. R. maculata, *DC.*	*	*					
9. R. macrantha, *DC.*	*						
10. R. macrocarpa, *Hn.*	*						
11. R. malleifera, *B. et H. f.*	*	*	*	*			
12. R. octomera, *B. et H. f.*	*						
13. R. Munsæ, *Schwf.*	......	*					
29. GARDENIA, *Ellis.*							
1. G. Thunbergia, *L. f.*	*	*	*	*	*	*	South of the tropic.
2. G. Jovis-tonantis, *Hn.*	......	......	......	*			
3. G. resiniflua, *Hn.*	......	......	......	......	......	*	
4. G. assimilis, *Afz.*	*						
5. G. nitida, *Hk.*	*						
6. G. Vogelii, *Hk. f.*	*	......	*	*			
7. G. Manganjæ, *Hn.*	......	......	......	......	......	*	
8. G. Annæ, *P. Wr.*	......	......	......	......	......	*	Seychelles Islands.
9. G. Abbeokutæ, *Hn.*	*						
10. G. konguensis, *Hn.*	*						
11. G. urcelliformis, *Hn.*	......	......	*				
12. G. fernandensis, *Hn.*	*						
13. G. ? zanguebarica, *Hn.*	......	......	......	......	......	*	
30. MACROSPHYRA, *Hk. f.*							
1. M. longistyla, *Hk. f.*	*	......	*				
31. OXYANTHUS, *DC.*							
1. O. ? Smithii, *Hn.*	......	......	......	*			
2. O. tubiflorus, *DC.*	*						
3. O. ? sulcatus, *Hn.*	*						
4. O. rubriflorus, *Hn.*	*						
5. O. speciosus, *DC.*	*						
6. O. querimbensis, *Kl.*	......	......	......	......	......	*	
7. O. formosus, *Hk. f.*	*						
8. O. breviflorus, *Bth.*	*						
9. O. gracilis, *Hn.*	*						
10. O. ? platystylis, *Hn.*	*						
11. O. unilocularis, *Hn.*	*						
12. O. macrophyllus, *Schwf.*	......	......	*				
32. MITRIOSTIGMA, *Hochst.*							
1. M. ? subpunctatum, *Hn.*	*						
2. M. Barteri, *Hk. f.*	*						
33. AMARALIA, *Welw.*							
1. A. bigoniæflora, *Welw.*	*	*	*	*			
34. MORELIA, *A. Rich.*							
1. M. senegalensis, *A. Rich.*	*	......	*				
35. ZYGOON, *Hn.*							
1. Z. graveolens, *Hn.*	......	......	......	......	......	*	
36. GALINIERA, *Del.*							
1. G. coffeoides, *Del.*	......	......	*				
37. EMPOGONA, *Hk. f.*							
1. E. Kirkii, *Hk. f.*	......	......	......	......	......	*	
38. FERETIA, *Del.*							
1. F. apodanthera, *Del.*	......	......	*				
2. F. ? canthioides, *Hn.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
39. POUCHETIA, *A. Rich.*							
1. P. africana, *DC.*	*			*			
2. P. parviflora, *Bth.*	*						
40. TRICALYSIA, *A. Rich.*							
1. T. Sonderiana, *Hn.*						*	Natal.
2. T. ovalifolia, *Hn.*						*	
3. T. buxifolia, *Hn.*				*			
4. T. syrmanthera, *Hn.*	*						
5. T. bracteata, *Hn.*	*						
6. T. congesta, *Hn.*					*		
7. T. coriacea, *Hn.*	*			*			
8. T. Nyassæ, *Hn.*						*	
9. T. reticulata, *Hn.*	*			*			
10. T. pallens, *Hn.*	*						
11. T. gabonica, *Hn.*	*						
12. T. okelensis, *Hn.*			*				
13. T. biafrana, *Hn.*	*						
14. T. micrantha, *Hn.*	*						
15. T. microphylla, *Hn*						*	
16. T. niamniamensis, *Schf.*			*	* ?			
17. T. djurensis, *Schwf.*			*				
18. T. jasminiflora, *B. et H. f.*						*	
19. T. crassifolia, *B. et H. f.*						*	
20. T. Kirkii, *Hn.*						*	
21. T. angolensis, *A. Rich.*				*			
Tribe VII. **Guettardeæ.**							
41. GUETTARDA, *Osb.*							
1. G. speciosa, *L.*						*	Madagascar, Seychelles, and Comoro Islands; also East Indies to the Pacific Islands and Australia.
Tribe VIII. **Alberteæ.**							
42. CREMASPORA, *Bth.*							
1. C. africana, *Bth.*	*	*	*			*	
2. C. ? Thomsoni, *Hn.*	*						
43. POLYSPHÆRIA, *Hk. f.*							
1. P. multiflora, *Hn.*						*	
2. P. lanceolata, *Hn.*						*	
3. P. parvifolia, *Hn.*						*	
4. P. Schweinfurthii, *Hn.*			*			??	
44. BELONOPHORA, *Hk. f.*							
1. B. coffeoides, *Hk. f.*	*						
45. AULACOCALYX, *Hk. f.*							
1. A. jasminiflora, *Hk. f.*	*						
46. LAMPROTHAMNUS, *Hn.*							
1. L. zanguebaricus, *Hn.*						*	
47. RHABDOSTIGMA, *Hk. f.*							
1. R. Kirkii, *Hk. f.*						*	
Tribe IX. **Vanguerieæ.**							
48. PENTANISIA, *Harv.*							
1. P. Schweinfurthii, *Hn.*			*				

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
49. Canthium, *Lam.*							
1. C. glaucum, *Hn.*	......	......	*	......	......	*	
2. C. Thonningii, *Bth.*	*						
3. C. setiflorum, *Hn.*	......	......	......	......	......	*	
4. C. nitens, *Hn.*	*						
5. C. neglectum, *Hn.*	......	......	*				
6. C. Schimperianum, *A. Rh*	......	......	*				
7. C. Vatkeanum, *Hn.*	......	......	*				
8. C. anomocarpum, *DC.*	*						
9. C. acutiflorum, *Hn.*	*						
10. C. caudatiflorum, *Hn.*	*						
11. C. horizontale, *Hn.*	*						
12. C. discolor, *Bth.*	*						
13. C. oligocarpum, *Hn.*	......	......	*				
14. C. zanzibaricum, *Kl.*	......	......	*	......	......	*	
15. C. gracile, *Hn.*	......	......	......	*			
16. C. Heudelotii, *Hn.*	*						
17. C. polycarpum, *Schwf.*	......	......	*				
18. C. glabriflorum, *Hn.*	*						
19. C. Cornelia, *Ch. et Schl.*	*						
20. C. hispidum, *Bth.*	*	......	......	*			
21. C. setosum, *Hn.*	*						
22. C. subcordatum, *DC.*	*						
23. C. congense, *Hn.*	......	......	......	*			
24. C. rubens, *Hn.*	*						
25. C. fœtidum, *Hn.*	......	......	......	......	* ?		
26. C. Afzelianum, *Hn.*	*						
27. C. Barteri, *Hn.*	*						
28. C. nervosum, *Hn.*	*						
29. C. Mannii, *Hn.*	*						
30. C. lividum, *Hn.*	......	......	......	......	......	*	
31. C. venosum, *Hn.*	*	......	*				
32. C. ? multiflorum, *Hn.*	*						
33. C. bibracteatum, *Hn.*	......	......	......	......	......	*	Madagascar, Seychelles, and Comoro Islands.
34. C. crassum, *Hn.*	......	......	*				
35. C. vangueroides, *Hn.*	*						
36. C. lanciflorum, *Hn.*	......	......	......	......	*		
50. Vangueria, *Comm.*							
1. V. infausta, *Burch.*	......	......	......	......	......	*	South of the tropic, Madagascar.
2. V. edulis, *Vahl*	*	......	*	......	* ?	......	
3. V. abyssinica, *A. Rich.*	......	......	*				
4. V. senegalensis, *B. et H. f.*	*						
5. V. canthioides, *Bth.*	*						
6. V. euonymoides, *Schwf.*	*	......	*	*			
7. V. umbellulata, *Hn.*	*						
8. V. concolor, *Hn.*	*	......	......	* ?			
9. V. membranacea, *Hn.*	*						
10. V. velutina, *Hn.*	......	......	......	......	*	*	
11. V. pauciflora, *Schwf.*	......	......	*				
12. V. tetraphylla, *Schwf.*	......	......	*				
51. Fadogia, *Schwf.*							
1. F. leucophlœa, *Hn.*	......	......	*				
2. F. Zeyheri, *Sond.*	......	......	......	......	*?	......	Transvaal.

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
51. Fadogia (*continued*).							
3. F. agrestis, *Schwf.*	*		*				
4. F. Cienkowskii, *Schwf.*	*	*	*	*			
5. F. glaberrima, *Schwf.*			*				
6. F. stenophylla, *Welw.*				*			
7. F. fuchsioides, *Welw.*			*	*			
8. F. ancylantha, *Schwf.*			*				
9. F. lactiflora, *Welw.*				*			
52. Cuviera, *DC.*							
1. C. acutiflora, *DC.*	*						
2. C. subuliflora, *Bth.*	*						
3. C. longiflora, *Hn.*	*						
4. C. trilocularis, *Hn.*	*						
53. Ancylanthos, *Desf.*							
1. A. rubiginosa, *Desf.*				*			
2. A. fulgidus, *Welw.*				*			
3. A. cinerascens, *Welw.*				*			
4. A. cistifolius, *Welw.*				*			
5. A. Bainesii, *Hn.*					*?		
54. Craterispermum, *Bth.*							
1. C. laurinum, *Bth.*	*						
2. C. cerinanthum, *Hn.*	*						
3. C. brachynematum, *Hn.*	*						
4. C. Schweinfurthii, *Hn.*			*				
5. C. montanum, *Hn.*	*						
Tribe X. **Ixoreæ.**							
55. Ixora, *L.*							
1. I. radiata, *Hn.*	*		*				
2. I. odorata, *Hk.*						*	Madagascar.
3. I. laxiflora, *Sm.*	*						
4. I. Thomsoni, *Hn.*	*						
5. I. riparia, *Hn.*	*						
6. I. breviflora, *Hn.*	*						
7. I. brachysiphon, *Hn.*	*						
8. I. guineensis, *Bth.*	*						
9. I. foliosa, *Hn.*	*						
10. I. Soyauxii, *Hn.*				*			
11. I. inundata, *Hn.*	*						
12. I. minutiflora, *Hn.*	*						
13. I. modesta, *Hn.*	*						
56. Pavetta, *L.*							
1. P. brachycalyx, *Hn.*	*						
2. P. Mannii, *Hn.*	*						
3. P. monticola, *Hn.*	*						
4. P. bidentata, *Hn.*	*						
5. P. owariensis, *Beauv.*	*						
6. P. glaucescens, *Hn.*	*						
7. P. puberula, *Hn.*	*						
8. P. crebrifolia, *Hn.*						*	
9. P. macrosepala, *Hn.*						*	

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	Externa Range.
56. PAVETTA (*continued*).							
10. P. neurocarpa, *Bth.*	*						
11. P. subcana, *Hn.*			*				
12. P. gracilis, *Kl.*						*	
13. P. abyssinica, *Fres.*			*				
14. P. Oliveriana, *Hn.*			*				
15. P. mollis, *Afz.*	*						
16. P. dolichosepala, *Hn.*				*			
17. P. hispida, *Hn.*	*						
18. P. genipæfolia, *Schum.*	*						
19. P. Baconia, *Hn.*	*		*	*			
20. P. Hookeriana, *Hn.*	*						
21. P. ternifolia, *Hn.*			*				
22. P. gardiniæfolia, *Hochst.*			*				
23. P. canescens, *DC.*				*			
24. P. rigida, *Hn.*	*						
25. P. gracilipes, *Hn.*	*						
57. COFFEA.							
1. C. arabica, *L.*	*		*	*		*	? Arabia.
2. C. liberica, *Bull*	*			*			
3. C. stenophylla, *G. Don*	*						
4. C. Zanguebariæ, *Lour.*						*	
5. C. brevipes, *Hn.*	*						
6. C. melanocarpa, *Welw.*				*			
7. C. hypoglauca, *Welw.*				*			
8. C. ? microcarpa, *DC.*	*						
9. C. Afzelii, *Hn.*	*						
10. C. subcordata, *Hn.*	*						
11. C. rupestris, *Hn.*	*						
12. C. jasminioides, *Welw.*	*			*			
13. C. racemosa, *Lour.*						*	
58. PSILANTHUS, *Hk. f.*							
1. P. Mannii, *Hk. f.*	*						
2. P. ? ebracteolatus, *Hn.*	*						
3. P. ? tetramerus, *Hn.*	*						
59. RUTIDEA, *DC.*							
1. R. rufipilis, *Hn.*	*						
2. R. parviflora, *DC.*	*						
3. R. olenotricha, *Hn.*	*	*					
4. R. ferruginea, *Hn.*	*						
5. R. hispida, *Hn.*	*						
6. R. Smithii, *Hn.*				*			
7. R. decorticata, *Hn.*	*						
8. R. membranacea, *Hn.*	*						
9. R. glabra, *Hn.*	*						
10. R. fuscescens, *Hn.*						*	
Tribe XI. **Morindeæ.**							
60. MORINDA, *Vaill.*							
1. M. citrifolia, *L.*	*	*		*			Old-World Tropics.
2. M. longiflora, *G. Don*	*	*	*	*			

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
Tribe XII. **Psychotrieæ.**							
61. Psychotria, *L.*							
1. P. pauridiantha, *Hn.*	*						
2. P. brachyantha, *Hn.*	*						
3. P. setacea, *Hn.*	*						
4. P. Mannii, *Hn.*	*						
5. P. foliosa, *Hn.*	*						
6. P. lophoclada, *Hn.*	*						
7. P. cornuta, *Hn.*	*						
8. P. humilis, *Hn.*	*						
9. P. bifaria, *Hn.*	*						
10. P. umbellata, *Thonn.*	*						
11. P. monticola, *Hn.*	*						
12. P. calva, *Hn.*	*						
13. P. leptophylla, *Hn.*	*						
14. P. Doniana, *Bth.*	*						
15. P. konguensis, *Hn.*	*						
16. P. subpunctata, *Hn.*	*						
17. P. brunnea, *Schwf.*	......	*					
18. P. longevaginalis, *Schwf.*	......	*					
19. P. gabonica, *Hn.*	*						
20. P. arborea, *Hn.*	*						
21. P. sciadephora, *Hn.*	*						
22. P. punctata, *Vatke*	......	......	......	......	......	*	
23. P. obtusifolia, *Poir.*	......	......	......	......	......	*	Madagascar.
24. P. zambesiana, *Hn.*	......	......	......	......	......	*	
25. P. Kolly, *Schum.*	*						
26. P. Benthamiana, *Hn.*	*						
27. P. owariensis, *Juss.*	*						
28. P. Brassii, *Hn.*	*						
29. P. Afzelii, *Hn.*	*						
30. P. cristata, *Hn.*	......	*	*				
31. P. abrupta, *Hn.*	......	......	......	......	......	*	
32. P. anetoclada, *Hn.*	*						
33. P. Kirkii, *Hn.*	......	......	......	......	......	*	
34. P. recurva, *Hn.*	*						
35. P. subobliqua, *Hn.*	*						
36. P. pumila, *Hn.*	......	......	......	......	......	*	
37. P. nigropunctata, *Hn.*	......	......	......	*			
38. P. bracteosa, *Hn.*	*						
39. P. globosa, *Hn.*	*						
40. P. insidens, *Hn.*	*						
41. P. subherbacea, *Hn.*	*						
42. P. infundibularis, *Hn.*	*						
43. P. subnuda, *Hn.*	*						
44. P. longistylis, *Hn.*	*						
45. P. bidentata, *Hn.*	*						
46. P. Vogeliana, *Bth.*	*						
47. P. latistipula, *Bth.*	*						
48. P. Schweinfurthii, *Hn.*	......	......	*				
49. P. lucens, *Hn.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
61. PSYCHOTRIA (*continued*).							
50. P. reptans, *Bth.*	*						
51. P. mucronata, *Hn.*			*				
52. P. stictophylla, *Hn.*	*						
53. P. obscura, *Bth.*	*						
54. P. crispa, *Hn.*	*						
55. P. trachystyla, *Hn.*	*						
56. P. Soyauxii, *Hn.*				*			
57. P. virens, *Hn.*	*						
58. P. Ansellii, *Hn.*	*						
59. P. zanguebarica, *Hn.*						*	
60. P. umbraticola, *Hn.*						*	
61. P. nubica, *Del.*			*				
62. GRUMILEA, *Gærtn.*							
1. G. psychotrioides, *DC.*	*						
2. G. succulenta, *Hn.*			*				
3. G. Kirkii, *Hn.*						*	
4. G. macrocarpa, *Hn.*	*						
5. G. venosa, *Hn.*	*						
6. G. micrantha, *Hn.*	*						
7. G. sphærocarpa, *Hn.*	*						
8. G. articulata, *Hn.*	*						
9. G. sulphurea, *Hn.*			*				
63. TRIAINOLEPIS, *Hk. f.*							
1. T. africana, *Hk. f.*						*	
2. T. Hildebrandtii, *Vatke*						*	Madagascar.
64. GEOPHILA, *D. Don.*							
1. G. reniformis, (?) *D. Don*	*						? America and India.
2. G. hirsuta, *Bth.*	*						
3. G. lancistipula, *Hn.*	*						
4. G. uniflora, *Hn.*	*		*				
5. G. Afzelii, *Hn.*	*						
6. G. obvallata, *F. Didr.*	*						
7. G. involucrata, *Schwf.*		*	*				
65. CEPHAËLIS, *Sw.*							
1. C. peduncularis, *Salisb.*	*			*			
2. C. suaveolens, *Schwf.*			*				
3. C. cornuta, *Hn.*	*						
4. C. fuscescens, *Hn.*	*						
5. C. rubescens, *Hn.*	*						
6. C. clausa, *Hn.*	*						
7. C. spathacea, *Hn.*	*						
8. C. Mannii, *B. et H. f.*	*						
9. C. latifolia, *Hn.*	*						
10. C. congensis, *Hn.*				*			
66. TRICHOSTACHYS, *Hk. f.*							
1. T. longifolia, *Hn.*	*						
2. T. petiolata, *Hn.*	*						
3. T. aurea, *Hn.*	*						
4. T. ciliata, *Hn.*	*						
67. LASIANTHUS, *Jack.*							
1. L. africanus, *Hn.*	*						

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
Tribe XIII. **Pæderieæ.**							
68. Siphomeris, *Boj.*							
1. S. fœtens, *Hn.*						*	
Tribe XIV. **Anthospermeæ.**							
69. Anthospermum, *L.*							
1. A. pachyrrhizum, *Hn.*			*				
2. A. muricatum, *Hochst.*			*				
3. A. asperuloides, *Hk. f.*	*						
Tribe XV. **Spermacoceæ.**							
70. Diodia, *Gron.*							
1. D. Kirkii, *Hn.*						*	
2. D. rubricosa, *Hn.*	*						
3. D. arenosa ?, *DC.*	*						? Brazil.
4. D. maritima, *Thonn.*	*			*			Tropical America.
5. D. breviseta, *Bth.*	*		*	*		*	Madagascar and Tropical America.
6. D. vaginalis, *Bth.*	*						
71. Gaillonia, *A. Rich.*							
1. G. calycoptera, *Jaub. et Sp.*			*				Arabia Petræa.
72. Spermacoce, *Dill.*							
1. S. tenuissima, *Hn.*			*				
2. S. filiformis, *Hn.*	*						
3. S. phyteuma, *Schwf.*			*				
4. S. compressa, *Afz.*	*						
5. S. ? pilosa, *DC.*	*						
6. S. senensis, *Hn.*			* ?			*	
7. S. stricta, *L. f.* ?	*		*			*	Old-World tropics.
8. S. hebecarpa, *Oliv.*	*		*				
9. S. leucadea, *Hochst.*			*				
10. S. stachydea ?, *DC.*	*	* ?					
11. S. radiata, *Sieb.*	*		*				
12. S. ramisparsa, *Pohl*	*						A common tropical weed.
13. S. Ruelliæ, *DC.*	*	*	*	*			
14. S. dibrachiata, *Oliv.*			*				Madagascar and Delagoa Bay.
15. S. Kotschyana, *Oliv.*			*			*	
16. S. compacta, *Hochst.*			*				
17. S. globosa, *S. et T.*	*					*	Cape de Verde Islands.
73. Hypodematium, *A. Rich.*							
1. H. sphærostigma, *A. Rich.*			*				
74. Octodon, *Thonn.*							
1. O. filifolium, *S. et T.*	*		*				
2. O. setosum, *Hn.*	*						
75. Richardia, *Houst.*							
1. R. scabra, *L.*						*	Tropical America.
76. Mitracarpum, *Zucc.*							
1. M. scabrum, *Zucc.*	*	*	*	*			Cape de Verde Islands.

Botanical Name.	Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique district.	External Range.
Tribe XVI. **Galieæ.**							
77. Rubia, *Tourn.*							
1. R. cordifolia, *L.*			*				South Africa and Asia.
2. R. discolor, *Turcz.*			*				
78. Galium, *L.*							
1. G. biafræ, *Hn.*	*						
2. rotundifolium, *L.*			*				Natal, Cape de Verde Islands, Europe, &c.
3. G. Aparine, *L.*	*		*				Widely spread over the world and reaching the Arctic regions.
4. G. Mollugo, *L.*			*				Widely distributed over Europe.
5. G. simense, *Hochst.*			*				
6. G. Decaisnei, *Boiss.*			*				The Levant and Persia.
[Vaillantia hispida, *L.*			*				The Levant.]
79. Benzonia, *Schum.*							
1. B. corymbosa, *Schum.*	*						
80. Lepipogon, *Bert. f.*							
1. L. obovatum, *Bert. f.*						*	Inhambane.
Pentas parviflora, *Hn.*						*	
Ixora coccinea, *L.*	*?						East Indies.
Trichostachys vaginalis, *Hn.*	*						

The three last-named species have been added subsequently to the printing of the corresponding portion of the 'Flora of Tropical Africa.' Of the above enumerated 482 species, 238 occur in Upper Guinea, but not in the other districts of Tropical Africa, 6 in the North Central district only, 62 in Nile-land, 28 in Lower Guinea only, 7 in the South Central district only, and 55 only in the Mozambique district.

In comparing the numbers deducible from the tabular view, it must be borne in mind that the two central districts have been but very imperfectly explored, and that the greater part of Welwitsch's Angolan collection remains to be added, so that the number of species given as known to occur in Lower Guinea must be doubled.

The following genera are endemic:—*Corynanthe*, *Crossopteryx*, *Virecta*, *Otomeria*?, *Hekistocarpa*, *Pauridiantha*, *Temnopteryx*, *Pentaloncha*, *Stipularia*, *Heinsia*, *Dictyandra*, *Leptactina*, *Macrosphyra*, *Amaralia*, *Morelia*, *Zygoon*, *Galiniera*, *Empogona*, *Feretia*, *Summary of Preceding Distribution.*

Tribes.	Number in Tropical Africa.				Number of Species.					
	Altogether.		Endemic.		Upper Guinea.	North Central.	Nile-land.	Lower Guinea.	South Central.	Mozambique District.
	Genera.	Species.	Genera.	Species.						
Naucleeæ	4	6	0	5	4	2	4	1	0	0
Cinchoneæ	3	4	2	4	2	0	2	3	0	1
Hedyotideæ	7	49	3	36	25	2	23	8	3	17
Mussændeæ	7	35	4	34	30	5	4	6	0	1
Hamelieæ	2	11	1	11	8	0	1	3	0	2
Gardenieæ	17	88	10	83	53	6	15	15	3	19
Guettardeæ	1	1	0	0	0	0	0	0	0	1
Alberteæ	6	10	4	10	4	1	2	0	0	6
Vanguerieæ	7	72	0?	68	38	1	22	13	6	7
Ixoreæ	5	65	1	62	47	1	8	10	0	8
Morindeæ	1	2	0	1	2	2	1	2	0	0
Psychotrieæ	7	95	1	92	71	4	9	4	0	11
Pæderieæ	1	1	0	1	0	0	0	0	0	1
Anthospermeæ	1	3	0	3	1	0	2	0	0	0
Spermacoceæ	7	29	2	19	18	3	16	4	0	7
Galieæ	3	9	0	3	2	0	8	0	0	0
dubiæ	2	2	1	1	1	0	0	0	0	1
Totals	81	482	29	433	306	27	117	69	12	82

Pouchetia, *Belonophora*, *Aulacocalyx*, *Lamprothamnus*, *Rhabdostigma*, *Psilanthus*, *Trichostachys*, *Hypodematium*, *Octodon*, and *Benzonia*.

In addition to these, 16 genera are confined to Africa and African Islands, including Madagascar and the Mascarene islands; 18 genera extend to Asia, the Indian Archipelago, Australia, or the Pacific islands, but do not reach either the West Indies or America; and 18 other genera have representatives in the New World.

RUBIACEÆ OCCURRING ELSEWHERE AS WELL AS IN TROPICAL AFRICA.

The following species of our flora have a distribution outside the limits of Tropical Africa; there are altogether 49 such species, which may be grouped according to the parts of the world to which they respectively extend. In the following lists the names of some species will occur more than once in the event of the species being found in different parts of the world.

1. *South Africa*.

Oldenlandia decumbens ...	Natal.
O. caffra	Cape and Natal.
O. Heynei	Natal.
O. capensis	Cape.
O. macrophylla	Natal.
Enterospermum littorale ..	? Inhambane, Mozambique.
Gardenia Thunbergia	Cape and Natal.
Tricalysia Sonderiana.....	Natal.
Vangueria infausta	Cape, Natal, and Transvaal.
Fadogia Zeyheri	Transvaal.
Spermacoce stricta (var.) ..	Natal and Kafirland.
S. Ruelliæ......................	Delagoa Bay.
Rubia cordifolia	Caffraria and Natal.
Galium rotundifolium ...	Cape and Natal.
G. Aparine	Cape, &c.
Lepipogon obovatum	Inhambane, Mozambique.

2. *Mascarene Islands, including Madagascar and the Comoro Islands.*

Uncaria africana	? Comoro Islands.
Pentas carnea	Comoro Islands.
Oldenlandia Bojeri	Madagascar and Comoro Islands.
O. decumbens	Madagascar.

Oldenlandia caffra	? Madagascar.
O. Heynei	? Madagascar, &c.
O. corymbosa	Comoro Islands.
O. capensis	Madagascar.
O. trinervia	Madagascar, Mauritius, and Seychelles.
O. macrophylla	Seychelles and Comoro Islands.
Mussænda arcuata	Mauritius and Madagascar.
Gardenia Annæ	Seychelles.
Guettarda speciosa	Madagascar, Seychelles, and Comoro Islands.
Canthium bibracteatum	Mauritius, Seychelles, Comoro Islands, and Madagascar.
Vangueria infausta	Madagascar, &c.
V. edulis	Madagascar, &c.
Ixora odorata	Madagascar.
Morinda citrifolia	Seychelles.
Psychotria obtusifolia	Madagascar.
Triainolepis Hildebrandtii	North-west Madagascar.
Diodia breviseta	Madagascar.
Spermacoce stricta	Mauritius (*teste* Baker, Fl. Maurit. p. 159).
S. ramisparsa	Mauritius and Madagascar.
S. Ruelliæ	Madagascar.

3. *North Africa, Madeira, Canary, and Cape de Verde Islands.*

Oldenlandia Schimperi	Upper Egypt.
O. strumosa	Cape de Verde Islands.
O. corymbosa	Cape de Verde Islands.
O. hedyotoides	Upper Egypt.
Spermacoce globosa	Cape de Verde Islands.
Mitracarpum scabrum	Cape de Verde Islands.
Galium rotundifolium	Cape de Verde Islands.
G. Aparine	North Africa, Madeira, and Canary Islands.
Vaillantia hispida	North Africa and Canary Islands.

In addition to these, P. B. Webb, in 'Spicilegia Gorgonea,' page 132, gives from the Cape de Verde Islands, *Hedyotis* (*Oldenlandia*) *Burmannia*, R. Br. in Wall. Cat. n. 868; *H.* (*Oldenlandia*) *virgata*, Willd.; and *H.* (*Kohantia*) *stricta*, Sm.

The only species of our flora which extends to the Arctic regions is *Galium Aparine*; *G. Mollugo*, var. (*G. erectum*), extends to many parts of Europe.

4. *South Europe, Asia Minor, Armenia, Persia, Arabia, Beluchistan, and Scinde.*

Pentas carnea	Tropical Arabia.
Oldenlandia Schimperi	Arabia Petræa, Beluchistan, and Scinde.
O. capensis	Syria (*teste* Boissier, Fl. Or. iii. p. 11).
O. hedyotoides	Armenia.
Coffea arabica	? Tropical Arabia.
Gaillonia calycoptera	Arabia Petræa.
Galium rotundifolium	The Levant and Armenia (*teste* Boissier, Fl. Or. iii. p. 49).
G. Aparine	Widely spread.
G. Mollugo	Widely spread.
G. Decaisnei	The Levant and Persia.
Vaillantia hispida	South Europe, the Levant, and Persia.

5. *Eastern and Tropical Asia, China, Pacific Islands, and Australia.*

Argostemma pumilum	? Nipal, North-west Himalayas to Burma, and mountains of the Deccan peninsula of India.
Oldenlandia Heynei	East Indies.
O. corymbosa	Widely spread.
O. trinervia	East Indies.
Randia dumetorum	East Indies and Hongkong.
Guettarda speciosa	East Indies and Australia.
? Ixora coccinea	East Indies.
Morinda citrifolia	Tropical Asia, Pacific Islands, and Queensland.
Geophila reniformis ?	East Indies and Pacific Islands.
Spermacoce stricta	East Indies and Hongkong.
S. ramisparsa	India.
Rubia cordifolia	Widely spread in Asia.
Galium rotundifolium	Common among the hills of India.
G. Aparine	Himalayas.

The Indian species, *Ixora coccinea*, which is often cultivated, has been sent to the British Museum by the Rev. A. Robb from Old Calabar, without any note stating that it was cultivated there or had been introduced into Africa.

6. *Tropical America.*

Oldenlandia corymbosa ...	Widely spread.
Geophila reniformis ?	Widely spread.
Diodia arenosa ?	Brazil.
D. maritima	Cuba, Guatemala, &c.
D. breviseta	West Indies, Guyana, and Panama.
Spermacoce ramisparsa......	Brazil.
Richardia scabra	Widely spread.

Of the 482 species which have been described in the third volume of 'The Flora of Tropical Africa' or added in these notes, 250 are new or not previously described; and of the 81 genera amongst which the species are distributed, 3 genera are new.

DESCRIPTION OF THE PLATES.

Plate VII.

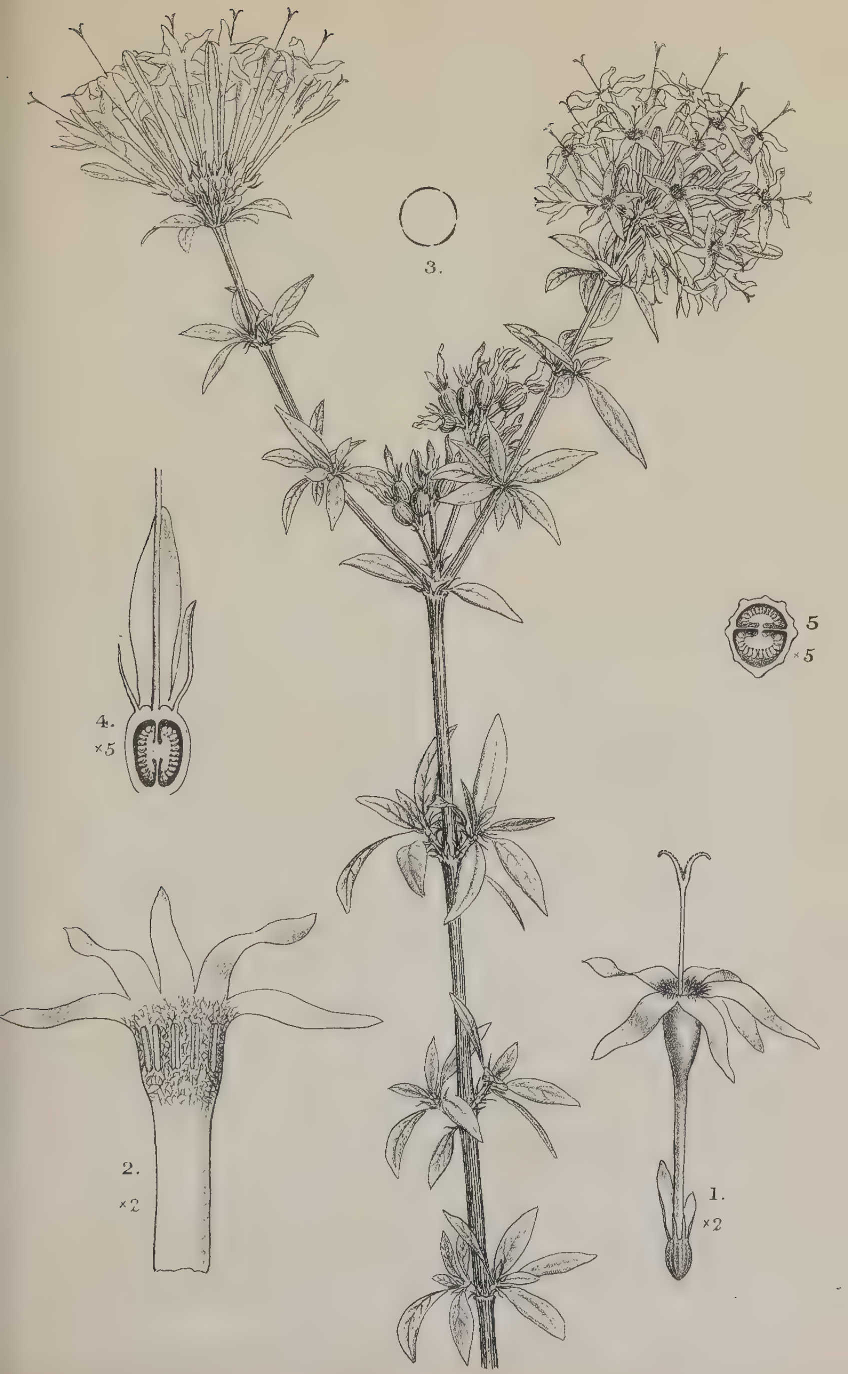
Pentas parvifolia, Hiern.

Fig. 1. An expanded flower, enlarged two diameters.
2. Corolla, laid open, showing the interior with the included stamens.
3. Diagram showing the valvate æstivation of the corolla.
4. Vertical section of the pistil and calyx, enlarged five diameters.
5. Horizontal section of the ovary, enlarged also five diameters.

Plate VIII.

Trichostachys vaginalis, Hiern.

Fig. 1. A flower-bud, enlarged four diameters.
2. Diagram showing the induplicate-valvate æstivation of the corolla.
3. An expanded flower, enlarged four diameters.
4. Corolla laid open, with vertical section of the ovary, enlarged also four diameters.
5. Stamens, front and side views, enlarged eight diameters.



.Blair del. et lith.
Mintern Bros. imp.

PENTAS PARVIFOLIA, *Hiern.*

Spicilegium Floræ Maroccanæ.

By JOHN BALL, Esq., F.R.S., F.L.S.

[Read March 1, 1877.]

(PLATES IX.–XXVIII.)

INTRODUCTORY OBSERVATIONS.

THE territory of Marocco extends from the Straits of Gibraltar, with the neighbouring part of the Mediterranean at its northern extremity, to the great desert on the southern side of the Great Atlas, and from the frontier of Algeria to the Atlantic coast of Northern Africa. Of this extensive region, about equal in extent to Spain, it may be truly said that none other so easy of access is so little known to geographers.

Although the chief ports are within a few days' journey from London or Marseilles, and are freely open to Europeans, so little is known of the interior that the maps, all founded on native information, which profess to represent the direction of the mountain-ranges and the course of the chief rivers, are hopelessly at variance, and of the best of them it may be said that the little positive knowledge we possess shows that even in its main features it is very wide of the truth.

The causes of our ignorance of the country are easily stated. The traditional policy of the government has been hostile to the admission of strangers into its terrritory; and as regards the natives of Christian States the difficulties have been aggravated by the fanatical character of a great part of the native population. But a still more serious, and probably a more enduring, obstacle to exploration arises from the fact that fully two thirds of the entire country is inhabited by independent tribes, who recognize no external authority, even when they accord a nominal supremacy to the Sultan of Marocco. These tribes, descendants of the original Berber population of Northern Africa, which has never been subjugated by any of the foreign rulers who have held the coast and the open country, occupy nearly all the mountain region Possessing, it would seem, many of the rude virtues common to such populations, they are constantly engaged in internal petty warfare, and always disposed to regard strangers not of their own tribe as lawful prey.

Even in the parts of Marocco where the natives have approached the limits of European civilization, access to mountain districts is all but impossible to strangers. The fine peaks of the Beni Hassan, within sight of the rock of Gibraltar and easy reach of Tangier and Tetuan, have never been approached by a traveller; and Sir John Drummond Hay, whose knowledge of the people and influence amongst them surpass that of any other European, pronounced against the feasibility of the excursion which we earnestly desired to make in that direction.

As a necessary consequence of what has been stated, our knowledge of the Flora of Marocco has been extremely limited, and, in spite of what has been done during the last few years, is still most imperfect; and the time is yet distant when it will be possible to give more than a rude outline of the relations between the vegetable population and those of the surrounding regions.

The earliest notice that I have found of botanical research into the Marocco Flora is in the 'Istoria Botanica' of Zanoni (Curator of the Botanic Garden at Bologna), published in 1675. He had received plants and seeds from Tangier from a Mr. Alexander Balaam, who appears to have been a merchant trading with Tangier during some part of the time when that town was held by the Portuguese and the English. The next contribution, and a more considerable one, is contained in a list published (1696) in the 19th vol. of the 'Philosophical Transactions' (p. 239 *et seq.*), but drawn up in 1673 by Mr. Spotswood, a surgeon who lived there during the English occupation, and gathered plants which he gave to the same Mr. Balaam and to Dr. Morison at Oxford There is some difficulty in identifying many of the species named; and I have not thought it worth while to cite the plants contained in Mr. Spotswood's list.

After the evacuation of Tangier by the English, under circumstances little creditable to our national honour, communication between Europe and Marocco became more unfrequent than ever, and, excepting some occasional negotiation for the release of Christian captives, seems to have almost ceased. At the latter end of the last century relations between some European powers and the Marocco Government became more frequent and almost amicable, so that travelling in the country seems to have been easier than it has been in more recent times. A French botanist, M. Broussonnet, who also visited the Canary Islands and some parts of Spain, spent some time in Marocco during the last ten years of the century. He explored the neighbourhood of Mogador and Tangier, visited several of the ports on the Atlantic coast, and made at least one journey into the interior, in which he reached Fez and Mequinez. Broussonnet sent specimens to the chief botanists of his day—to Willdenow at Berlin, to Desfontaines at Paris, to Gouan at Montpellier, and to Cavanilles at Madrid. Most of the latter were published by that excellent botanist in the 'Anales de Ciencias Naturales,' a now scarce periodical which secured for Spain a temporary place in the republic of science, which she did not long retain. A few of Broussonnet's plants were also published by Willdenow in his edition of the 'Species Plantarum;' and a few others are referred to in Desfontaines's 'Flora Atlantica;' but the greater part of his collections, now in the museum at Montpellier, remained unexamined until M. Cosson visited that city. The results of the latter's study of that collection form a portion of the materials, which we hope soon to see published. Unfortunately Broussonnet seems to have been somewhat careless respecting the localities whence his specimens came, and to have sometimes intermixed those from the Canary Islands, South Marocco, Tangier, and Spain. Several undoubted errors that have been detected throw doubt on the authenticity of his localities when unconfirmed by other authorities.

About the time of Broussonnet's visits to Marocco Mr. Schousboe was appointed as Danish consular agent at Mogador, and subsequently at Tangier. He was an active and intelligent observer, who studied carefully the vegetation of both the districts above named. Besides this he collected a few plants in the course of a journey in which he reached the city of Marocco, and another which led him to Fez and Mequinez. He was the author of the first attempt at a Flora of Marocco, the first portion of which, including the Linnean classes from Monandria to Enneandria, with a few new species of other classes, was published in Danish and in German in 1801. Unfortunately, the work remained unfinished. Although Schousboe lived for many years afterwards chiefly at Tangier, and added very largely to his collections, I am not aware that he worked at the continuation of the work, which, in the German edition, bears the title "Beobachtungen über das Gewächsreich in Marokko." Schousboe's herbarium is preserved at Copenhagen; but the large collection of his duplicates passed not long ago into the possession of M. Cosson, who has liberally given sets of them to the Kew Herbarium and to myself.

Early in this century a French ecclesiastic, the Abbé Philippe

Durand, visited Marocco, reached Fez and Mequinez, and, so far as I know, alone of European travellers traversed some part of the great forest of Mamora, respecting which many a strange story circulates among the natives of Marocco.

In 1809 was published the first edition of the work which gives by far the fullest account of Marocco that has yet appeared, 'An Account of the Empire of Marocco,' by James Grey Jackson. Mr. Jackson lived for the greater part of sixteen years in South Marocco; he became familiar with the language and manners of the people, and must have acquired more of their confidence than any previous European visitor, as he not only travelled by several routes through the lower country near the coast, but was allowed to join a military force proceeding over the Atlas from Marocco to Tarudant.

Mr. Jackson does not, however, seem to have ventured on entering the city of Tarudant; nor, though he approached Wadnoon, did he actually visit that place.

Though not a naturalist, Jackson was a very intelligent observer; and on some points, especially regarding the curious cactoid Euphorbias of South Marocco, he has given information interesting to botanists.

The next contributor to the knowledge of the Marocco flora was M. Salzmann, an active collector who, after previous visits to other interesting spots in the Mediterranean, spent a considerable time at Tangier in 1825, and seems to have explored very carefully the district within convenient reach of that city. Salzmann does not appear to have had much scientific knowledge; but he was a sharp-eyed collector, and often detected differences between plants found by him and allied species, with which they had been confounded by other botanists. Several of these were published by the late M. A. P. Decandolle, then at the zenith of his scientific fame and authority, who had shortly before commenced the publication of that colossal work, the 'Prodromus Systematis Naturalis.' Others remained unpublished, except for the manuscript name attached to them by Salzmann. As, however, his collections were sold, and were sufficiently numerous to supply the demands of the chief botanists of his time, this has been, I think, justly regarded as equivalent to publication, and as constituting a title to priority over names subsequently given by other botanists.

Very complete sets of Salzmann's Tangier plants were contained in the herbarium of Mr. Bentham (presented by him to the national collection at Kew), and in that of my late lamented friend M. Jacques Gay (purchased by Dr. Hooker, and also given to the Kew Herbarium); so that I have had the opportunity of examining original specimens of nearly all Salzmann's plants.

In 1827 my excellent friend the late Philip Barker Webb spent three weeks at Tangier, and then visited Tetuan, where he was able to ascend two of the neighbouring mountains, and to discover amongst other novelties a new genus of Cruciferæ, for which, up to the present time, no other locality is known. His collections, preserved along with the remainder of his great herbarium at Florence, have been examined by M. Cosson and by myself.

During the years between 1840 and 1870 many botanists touched at Tangier, including my friend M. Boissier, with the late M. Reuter, Dr. Lagrange, M. Blanche, M. Marés, and M. Jourdan. Several of the plants collected by MM. Boissier and Reuter were described by them in a little volume styled 'Pugillus Plantarum Novarum Africæ borealis Hispaniæque australis.' In that work the criteria for the admission of new species, so justly maintained in the great works on which M. Boissier's fame depends, were somewhat unduly relaxed.

In 1859 the late Rev. R. T. Lowe contributed to the 'Proceedings' of this Society a list of plants observed by him in the immediate neighbourhood of Mogador; and most of these are preserved in the herbarium bequeathed by him to the Royal Gardens at Kew.

In June 1851 I made an attempt to reach the higher summits of the Lesser Atlas in the neighbourhood of Tetuan; but, owing to the disturbed condition of the district, I was limited to the immediate neighbourhood of the city, which, however, offers many species of interest not found about Tangier.

In 1869 my indefatigable friend, Mr. George Maw, was somewhat more successful than myself, and was permitted to ascend part of the Beni Hosmar, previously visited by Webb.

In 1867, chiefly through the influence and with the aid of M. Cosson, whose intimate acquaintance with the flora of Northern Africa is unrivalled by any competitor, the successful botanical traveller Mr. Balansa was despatched to Mogador, with the object of attempting to investigate the flora of the Great Atlas range as far as circumstances would permit. Although receiving every assistance from the French diplomatic agents in Marocco, his progress was impeded at every step; and after about a fortnight he was forced to abandon the attempt and return to Mogador. He nevertheless was able to collect a large number of the new and remarkable species which characterize the skirts of the great mountain-range and the lower mountains that diverge from the main chain.

The short time at his disposal enabled M. Balansa to collect so few duplicates that many of the new species subsequently described by M. Cosson are not to be found in the principal herbaria of Europe, and several of these, as well as the other plants of his journey, are preserved only in the magnificent herbarium of M. Cosson.

Along with other materials scarcely to be found outside that herbarium, I should mention a collection made by M. Warion, in the medical service of the French army, a good observer and collector, who gathered many plants on the eastern frontier of Marocco, adjoining the French province of Oran.

Early in the year 1871 Dr. Hooker, who had long felt a desire to explore the range of the Great Atlas, applied to Earl Granville, then Secretary of State for Foreign Affairs, to use the influence of the English Government at the court of Marocco to obtain the necessary permission of the Sultan. The information received from Sir John Drummond Hay, our minister at the court of Marocco, was so far favourable that Dr. Hooker determined to leave England in the spring of that year; and I was fortunate enough to be able to accompany him, along with our mutual friend Mr. George Maw, who, as well as myself, had already made an attempt to visit the extremity of the chain of the Lesser Atlas of Marocco in the neighbourhood of Tetuan.

We received before starting valuable information and aid from our excellent friend M. Cosson, who was kind enough to prepare a manuscript list of all the plants then known or believed to inhabit the Marocco territory, as far as his unequalled means of information would go.

In our subsequent course we were under deep obligations to our active and energetic representative in Marocco already named, and to all the British consular agents on the coast, and especially to the late Mr. Carstensen, then Vice-consul at Mogador, through whose hospitality and active assistance our stay was rendered agreeable, and our journey into the interior materially expedited.

After three days passed at Tangier, during which we made an excursion to Cape Spartel, and thence along the Atlantic coast to the so-called Cave of Hercules, we started for Tetuan, which we reached early on the 12th of April. On the following day we ascended the highest of the picturesque mountains that enclose the verdant valley of Tetuan, called Beni Hosmar, the same which had been visited more than forty years before by the late Mr. Webb. Although the season was not yet sufficiently advanced, we collected nearly all the species found by our predecessor, with several others of much interest. After another day well spent on the rocky ground in the immediate neighbourhood of the city, we started on the 15th to ride along the coast to Ceuta, thereby adding some additional species to our rapidly growing collections. The botanical exploration of the coast between Ceuta and Tangier, on the seaward slopes of the Angera Mountains, would be of great interest; and until this has been effected it will not be possible to say whether *Rhododendron ponticum*, *Helianthemum lasianthum*, and several other remarkable species now known on the northern side of the Straits of Gibraltar are really absent from the southern shores. The country, however, is considered too unsafe, especially for travellers starting from Ceuta, and we traversed the Straits in the felucca, by which the garrison and population of Ceuta keep up communication with Algeciras. Two days' unexpected detention on the Spanish side was not ill employed in a survey of the spring vegetation of the hills above Algeciras and the rock of Gibraltar. Returning to Tangier we were detained two days more, which were employed in putting in order and further increasing our collections. Mr. Maw, who had returned direct from Tetuan to Tangier, made in the interval two fruitful excursions to some swampy brackish lakes about 14 miles S.S.W. of the latter city.

Having at length received the necessary letter from the Sultan to the Governor of Mogador, we left Tangier on the 20th of April in the French steamer 'Vérité,' bound for the Atlantic ports of Marocco and the Canary Islands. On the following day we lay off Rabat, but, owing to the heavy swell, were unable to land. On the following day, however, we landed at Casa Blanca, or Dar el Beida, a place not mentioned by any of the botanists who have visited the coast. Having made a tolerably large collection on the bare hills near Casa Blanca, and been hospitably received by Mr. Dupuis, the British vice-consul, we continued our voyage to

Mogador, not having any favourable opportunity for landing at Mazagan or Saffi. We reached Mogador on the 25th of April; and after attending to the requisite arrangements for our journey we visited the curious neighbourhood of that town. The vegetation of the neighbourhood, and especially that of the low rocky island which forms the port, had suffered severely from the periodical visitation of locusts which had lately passed over the district; but we were able to secure most of the interesting species found by our predecessors; and on the 29th we started for the interior, making a slight detour by keeping southward near the coast for some five or six miles, and thereby making fuller acquaintance with the Argan forest, and then across the country till we rejoined our tents and baggage outside the walls of the extensive castle of the Governor of Shedma. During most of the day we had traversed the northern part of Haha, a very large province that extends along the coast from Mogador to Agadir and to the skirts of the Atlas chain. It is needless to say that on this, as on each succeeding day of our ride to Marocco, we encountered many interesting plants, some altogether new to us, some known only from dried specimens, and several hitherto undescribed. On the evening of the 30th we reached Aïn Oumast, a spring where travellers necessarily encamp, as for many miles eastward the country is an arid stony desert, closely resembling in aspect, as well as in its vegetation, some parts of the Sahara.

On the 1st of May we encamped at Sheshaoua, a veritable oasis, where in the shade of fruit-trees we were surprised to find many common European species. The soil surrounding it appears to contain much gypsum, and produced an unusual proportion of Chenopodiaceæ.

A long ride on the following day took us to Misra ben Kara, a place near the banks of a considerable stream that flows northward from the Great Atlas; and on the following day a short but hot ride across the glowing plain took us to the ancient capital of Marocco.

While detained in Marocco Mr. Maw made an interesting excursion to the nearest of some rocky hills of metamorphic rock that rise a few miles N.W. of the city. He brought back a new species of *Boerhavia*, *Forsåkhlia tenacissima*, *Andropogon laniger*, and several other species not hitherto seen by us.

On the 8th of May, after encountering various tokens of unfriendly disposition on the part of some of the native authorities, we turned our faces towards the chain of the Great Atlas, which rises in full view of the city. Early on the following day we reached Tasseremont, and there began to make acquaintance with the special flora of the Great Atlas, gathering several of the species first seen by M. Balansa, as well as some others which he had not met. Being unable to continue our course towards the high range immediately south of Tasseremont, we turned S.W., and encamped on the same evening near a place called Ourika, at the opening of a valley to which we have given the same name. This valley appears to penetrate deeply the main chain of the Atlas, which rose patched with snow in the background. We naturally desired to ascend its course, and started on the 10th of May for that purpose. The scenery and the vegetation were full of interest; and it was with much annoyance that, at the pressing instance of our escort, who alleged an insurrection among the people of the upper valley, we were forced to return to a village near the opening. On the following day we skirted the base of the mountains through a district called Reraya, and encamped near to a stream descending from the main chain. It now became clear that there existed an organized plan on the part of our escort, in concert with the native chiefs, to prevent us from accomplishing our design of penetrating to the interior of the Great Atlas chain. The firmness of Dr. Hooker prevailed, however, over the reluctance of the escort; and the circumstance that we were able to secure the cooperation of a native Berber Sheik, finally enabled us to do a good deal more than the latter originally contemplated. On the following day we crossed a low range dividing the stream last mentioned from a parallel one which flows through the valley, which, from the name of the tribe inhabiting it, we called Aït Mesan*.

On the following day the friendly Sheik undertook to conduct us *to the snow*; and, as we had seen no snow save in patches on the highest part of the chain, this was taken to mean the ascent of at least one of the higher summits. On the 13th we followed a steep and difficult track, amid a vegetation mainly new to us,—where it was tantalizing to be content with a specimen or two that could be snatched while pressing onward—and some time after midday reached the last village, called Arround, standing at nearly 7000 feet above the sea-level, a short distance beyond a barrier partly composed of rock and partly of ancient moraine, the only undoubted moraine seen by us in the Atlas. Here the scenery assumed a singularly stern character. The floor of the valley extends for some way nearly level, and then slopes gradually upward, enclosed on every side but one by steep and rugged peaks, nearly bare of snow. But in the hollows and recesses of the valley, at no great height above the village, snow lay in various directions; and towards one snow-bed our guide, in accordance with his promise, led us. Although many plants were not yet in flower, we found at every step something of engrossing interest—among the novelties that which most struck us being the curious *Chrysanthemum* with scarious involucre, which I have called *Chrysanthemum Catananche*. Our return to our camp in the lower valley in great part by night, and in almost pitch darkness, was difficult and even somewhat dangerous.

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* To the best of my belief the Aït Mesan valley, as well as the parallel and nameless one in which we camped on the 11th of May, is included within the district known as Reraya; and accordingly the labels for all Dr. Hooker's plants collected in both valleys bear the latter name. As there appeared to be no doubt that the valley wherein we passed five days is correctly named Aït Mesan, I have adopted that name in my labels, and have reserved the name Reraya for the valley first reached by us and the ridges which we traversed in approaching and departing from it. I have mentioned this, as without such explanation botanists might hereafter suppose that plants gathered at the same time and place by Dr. Hooker and myself came from two distinct localities.

Our object now was to persuade the Sheik to let us sleep at the village of Arround, whence we felt that we could in one way or other attain the higher region, and thus accomplish in some measure the main object of our journey. After some negotiation this plan was arranged; and on the 15th of May, before the sun had well risen, we started from Arround with a very threatening sky, determined to ascend as far as might be possible. Fortunately the Sheik did not insist on accompanying us, but appointed two guides with injunctions not to let us go beyond a small stone hut at the base of the ascent to the pass of Tagherot. It should have been stated that on our first visit two days before, we ascertained that a somewhat frequented track leads from the head of Aït Mesan to the upper part of the Sous valley on the opposite side of the main chain. The weather had become cold and rainy when we reached the hut above referred to. Here our guides endeavoured to make us understand that it was too dangerous to go further; and we made no show of resistance, but encouraged them to make a fire in the hut while we collected plants round about. As soon as they were thus engaged we started up the track, which throughout a steep ascent of over 3000 feet is well engineered, sometimes in regular zigzags, such as are seen in Switzerland or Tyrol. It is needless to say that every step in our ascent was of engrossing interest; but the weather grew steadily worse, as the rain became sleet, and then snow. We were overtaken by our guides, who used every means of threat and entreaty to induce us to return: for a time we silenced them by some silver coins; but they were in a pitiable state as we approached the summit. Except on some ledges of rock it was no longer possible to get at plants; and the snow driven by a violent wind made it impossible to see more than a few feet. Mr. Maw alone reached the actual crest of the ridge, but could see nothing. I, as well as Dr. Hooker, was a little lower down; and when Mr. Maw returned we readily consented to forego the barren honour of touching the summit, which is, by our observations, about 11,500 feet above the sea.

On the following day we returned to our camp, the valley above Arround being deep in snow, and no more botanizing being there practicable. The following day was needed to arrange and pack our collections; and on the 18th we reached a place called Sektana, near the base of the main range, of which it commands a very fine view. On the next morning Mr. Maw left us, to return to England, taking with him two of our escort; while we proceeded westward by a place called Gurguri, and, after crossing the wide stony bed of a torrent called Oued en Fisk, reached Amsmiz, the largest place we had yet seen on the skirts of the Atlas. Here, after some trouble, we succeeded in making another excursion into the interior of the range; and from a village near the head of the valley, where we slept, we were able on the 23rd of May to ascend the highest summit near its head, called Djebel Tezah. The chain has here diminished considerably in height; for while the Tagherot pass is as nearly as possible 11,500 feet in height, the summit of Djebel Tezah only attains to about 11,000 feet. Thence we were able to see across the great valley of Sous, and for the first time beheld the parallel range, or Anti-Atlas, some 60 miles distant, which, at a rough estimate, can scarcely attain the height of 10,000 feet.

Returning to Amsmiz, our course lay through the sloping plain at the foot of the mountains to Mzouda; and on the 26th we passed Keira (where M. Balansa had found a friendly reception), and encamped near the village of Seksaoua. Two days, on one of which we ascended a neighbouring mountain to the height of some

4600 feet above the sea, were very productive in species not before seen, and one or two of them altogether new. We next went to Milhaïn, psssing on the way Imintenout, where the main track from Marocco to Tarudant enters the mountains. Our next camp was outside the Kasbah or Castle of the Governor of Mzouda, then engaged in local war with the Governor of Haha. This affair caused us, in compliance with an urgent letter forwarded by courier from Mr. Carstensen, to alter our route and proceed northward, to a place called Mskala, on the border of the provinces of Haha and Shedma. Here the Governor of the latter province was encamped with a considerable force of his retainers, watching the progress of the petty war pending between the neighbouring tribes. On the next evening we met Mr. Carstensen by appointment at the Kasbah of the Governor of Shedma; and instead of returning direct to Mogador, we proceeded together on the 1st of June through a pleasant country to Aïn el Hadjar, a place where numerous springs break out from the foot of the Djebel Hadid, or Iron Mountain, a long, flat-topped ridge that rises near the coast some 15 miles north of Mogador. Although the heat was by no means oppressive, the season was rather far advanced for seeing the vegetation to full advantage; but we passed a not unprofitable day upon the mountain, the chief drawback on our enjoyment being the extraordinary number and variety of spiny and prickly bushes which cover its slope. One of these, which escaped the vigilant eyes of M. Balansa when he visited the mountain, is the widely spread tropical *Celastrus*, which, when found in the south of Spain, was taken to be a new species and called *C. europæus*, but which Professor Oliver has shown to be the *C. senegalensis* of Lamarck. We had already gathered this plant near the foot of the Great Atlas; but until then it was not known to grow anywhere between Senegal and the south of Spain.

On June 3rd we returned to Mogador, and were again hospitably entertained by Mr. and Mrs. Carstensen, until the arrival of a British steamer enabled us to take our passage homeward. We were able to spend a great part of one day at Saffi, where we embarked cargo, and, among other plants of interest, were enabled to add to the short list of Canary-Island plants that extend to the African coast the curious fleshy *Zygophyllum Fontanesii*, figured by Webb in the 'Phytographia Canariensis.'

We also landed at Mazagan, and had time enough to make a short walk along the shore near that town, and add two or three species to our list of the coast-flora.

On reaching Tangier Dr. Hooker's engagements forced him to proceed at once to Gibraltar, and thence return to England. I was enabled to spend one day at Tangier, and after an absence of not quite two months found the aspect of the vegetation wonderfully altered, since the appearance of a large number of species not before seen gave the neighbourhood an aspect of complete novelty. The flowers of the *Cisti* had disappeared; but in their place were many Compositæ and Labiatæ and other summer-flowering species. The most conspicuous was the magnificent *Salvia bicolor*, which attains a height of 7 or 8 feet, each of its numerous branches bearing the conspicuous white-and-blue flowers to which it owes its name.

During the period of our stay in the interior we had arranged, through the kind assistance of Mr. Carstensen, to send two natives to collect plants near Agadir, about 80 miles south of Mogador, near to Cape Guer, where the Great Atlas range finally subsides into the Atlantic Ocean. The result, which seemed to show that the character of the vegetation does not vary much along this part of the coast, yet sufficed to prove that with due perseverance something might be accomplished towards extending our knowledge of the Marocco flora through native collectors.

M. Cosson, having succeeded in securing the active assistance of the late M. Beaumier, French Consul at Mogador, and sparing on his own side neither trouble nor expense to effect his object, has caused two native collectors to travel into the interior for several successive seasons. One of these, a very intelligent Jew, a native of Akka, a place on the southern side of the Great Atlas between the rivers Sous and Noun, has been chiefly employed in the region, utterly inaccessible to European travellers, between the oasis of Akka and the neighbourhood of the Atlantic coast. The other, a Schleuh by birth, and a native of the mountains, has been mainly engaged in making collections in a district nearly adjoining the portion of the Great Atlas which we were able to explore. The collections first sent home were in indifferent condition, and the specimens incomplete; but M. Cosson's perseverance overcame all difficulties, and the collections lately received would do credit to a professed naturalist.

When I consulted my excellent friend M. Cosson on the subject of the present publication, he was good enough to suggest that we should jointly bring out a work which might bear to the future Flora of Marocco the same relation that Desfontaine's 'Flora Atlantica' will hold to the, I trust, not distant Flora of Algeria.

I may at once say that I have no claim whatever to approach M. Cosson's extensive and accurate knowledge of the flora of North Africa and South-western Europe, and I feel that it would be a high honour to be associated with him in such a work as that suggested; but seeing that circumstances have placed me in possession of a considerable mass of materials that must go towards its production, I have thought it better without further delay to present it to this Society under the title "Spicilegium Floræ Maroccanæ," accompanied by lithographed plates illustrating some of the new species described, presented to the Society jointly by Dr. Hooker and myself.

I trust that M. Cosson will carry out his intention of speedily publishing in a compendious form the rich materials for the Flora of Marocco, most of which are in his exclusive possession, and thus preparing the way for a more complete work.

In the following descriptive catalogue I have, as a rule, avoided referring to plants not yet published by M. Cosson, excepting where this was necessary to name or illustrate specimens collected by us or other recent travellers, although, through his liberality, I am in possession of many species not enumerated in the following pages.

Although I feel that the time has not yet come for attempting a general survey of the Marocco flora, and the materials for discussing the subject must remain further incomplete until the publication of the long expected Flora of Algeria, it would be inexpedient to close these introductory remarks without a brief view of the geographical relations of the Marocco species to those of the surrounding regions. For this purpose I have enumerated in tabular form the Natural Orders indigenous to Marocco under headings that show the distribution of the species hereafter enumerated.

The following is a tabular view of the Marocco flora, showing:— 1. The whole number of species belonging to each Natural Order found in Marocco; 2. The number of these which are cosmopolitan or extend in the Old World beyond the Mediterranean region; 3. Species of the Mediterranean region including Macaronesia; 4. Mediterranean excluding Macaronesia; 5. Confined to Western Mediterranean region excluding Macaronesia; 6. Species exclusively confined to Algeria and Marocco; 7. Species confined to the Iberian peninsula and Marocco; 8. Species known only in Macaronesia and Marocco; 9. Species peculiar to Marocco:—

Natural Order.	Total of Marocco species.	Cosmopolitan or Temperate Old World.	Mediterranean region including Macaronesia.	Mediterranean region excluding Macaronesia.	Western Mediterr. region excluding Macaronesia.	Algeria and Marocco.	Iberian peninsula and Marocco.	Macaronesia and Marocco.	Peculiar to Marocco.
Ranunculaceæ	33	11	5	9	4	1	1	...	2
Berberideæ..............	1	...	...	1					
Papaveraceæ	21	10	...	4	2	1	2	...	2
Cruciferæ	73	25	12	16	2	5	3	...	10
Capparideæ	1	...	...	1					
Resedaceæ	13	3	...	2	1	1	2	...	4
Cistineæ	28	3	2	13	2	1	6	1	
Violarieæ	3	1	...	...	1	...	...	...	1
Polygaleæ	5	...	...	3	...	...	...	...	2
Frankeniaceæ	2	2							
Caryophylleæ	69	29	9	13	6	2	5	1	4
Portulacaceæ............	2	2							
Tamariscineæ	4	1	...	2	...	...	...	...	1
Hypericineæ	7	1	...	1	5				
Malvaceæ	12	3	1	5	2	...	1		
Lineæ	10	3	2	...	3	...	1	...	1
Zygophylleæ	3	...	1	1	...	...	...	1	
Geraniaceæ	21	9	4	4	3	...	...	...	1
Rutaceæ..................	4	1	...	2	...	...	...	...	1
Celastrineæ	1	1							
Rhamneæ	4	...	...	3	1				
Ampelideæ..............	1	...	...	1					
Acerineæ	1	...	...	1					
Anacardiaceæ	4	...	1	2	...	1			
Coriareæ	1	...	...	...	1				
Leguminosæ	189	27	46	37	24	11	16	3	25
Rosaceæ..................	16	7	1	5	1	...	1	...	1
Saxifrageæ..............	5	3	...	1	...	...	...	...	1
Crassulaceæ	18	7	...	1	5	...	1	...	4
Droseraceæ	1	...	...	...	...	...	1		
Halorageæ..............	2	2							
Myrtaceæ	1	...	1						
Lythrarieæ..............	6	2	2	2					
Onagrarieæ	3	3							
Cucurbitaceæ............	4	1	1	2					
Ficoideæ..................	4	2	1	1					
Umbelliferæ	86	17	11	18	20	5	4	...	11
Araliaceæ	1	1							
Caprifoliaceæ............	7	3	2	1	1				
Rubiaceæ	30	8	3	9	4	3	1	...	2
Valerianeæ..............	8	2	1	5					
Dipsaceæ	6	1	1	...	3	...	...	...	1
Totals	711	191	107	166	91	31	45	6	74

Natural Order.	Total of Marocco species.	Cosmopolitan or Temperate Old World.	Mediterranean region including Macaronesia.	Mediterranean region excluding Macaronesia.	Western Mediterr. region excluding Macaronesia.	Algeria and Marocco.	Iberian peninsula and Marocco.	Macaronesia and Marocco.	Peculiar to Marocco.
Brought forward	711	191	107	166	91	31	45	6	74
Compositæ:									
Corymbiferæ	83	10	19	17	11	9	1	1	15
Cynaraceæ } 208 ..	58	6	8	12	13	4	5	...	10
Cichoriaceæ	67	13	14	14	10	6	5	1	4
Lobeliaceæ	1	...	...	...	1				
Campanulaceæ	13	1	3	...	2	...	3	...	4
Ericaceæ.................	9	4	1	1	2	...	1		
Sapotaceæ	1	...	...	...	...	...	...	...	1
Plumbagineæ...........	18	3	...	6	4	...	2	...	3
Primulaceæ	7	3	...	1	2	...	1		
Oleaceæ	7	1	1	3	1	1			
Apocynaceæ	2	...	...	1	1				
Asclepiadeæ	3	...	...	1	1	...	...	...	1
Gentianeæ	8	5	3						
Boragineæ	35	9	5	8	7	1	1	1	3
Convolvulaceæ	10	4	3	1	2				
Solanaceæ	11	4	4	3					
Scrophularineæ	61	16	5	9	9	4	7	1	10
Orobancheæ	12	1	1	2	3	...	3	...	2
Lentibularieæ...........	1	1							
Acanthaceæ	1	...	1						
Verbenaceæ	3	1	1	1					
Selagineæ	1	...	...	1					
Labiatæ	81	21	6	10	14	2	5	...	23
Plantagineæ	11	2	5	3	...	1			
Nyctagineæ	2	1	...	...	...	...	...	...	1
Illecebreæ	10	4	2	2	2				
Amaranthaceæ	6	4	...	1	...	1			
Chenopodiaceæ	20	13	4	1	...	...	...	2	
Polygoneæ	17	9	3	2	2	...	...	...	1
Thymeleæ	7	2	1	1	1	...	2		
Laurineæ	1	...	...	1					
Santalaceæ..............	3	1	2						
Cytineæ	1	...	1						
Aristolochieæ............	3	...	1	...	2				
Euphorbiaceæ	24	7	3	4	3	...	...	...	7
Urticaceæ	7	4	1	1	1				
Ulmaceæ	2	2							
Cupuliferæ..............	4	...	...	3	...	...	1		
Salicineæ	6	4	...	1	...	...	...	1	
Ceratophylleæ	1	1							
Gnetaceæ	2	...	1	1					
Coniferæ	7	1	2	2	1	1			
Orchideæ	18	7	2	9					
Irideæ	14	3	2	4	2	...	1	1	1
Amaryllideæ	11	...	...	4	2	...	4	...	1
Totals............	1381	359	212	297	190	61	87	14	161

Natural Order.	Total of Marocco species.	Cosmopolitan or Temperate Old World.	Mediterranean region including Macaronesia.	Mediterranean region excluding Macaronesia.	Western Mediterr. region excluding Macaronesia.	Algeria and Marocco.	Iberian peninsula and Marocco.	Macaronesia and Marocco.	Peculiar to Marocco.
Brought forward ...	1381	359	212	297	190	61	87	14	161
Dioscoreæ	1	1							
Alismaceæ	3	3							
Juncagineæ	1	...	...	1					
Potameæ	3	3							
Palmæ	2	1	...	1					
Typhaceæ	1	1							
Aroideæ	3	1	1	1					
Lemnaceæ	1	1							
Liliaceæ	43	7	11	12	7	2	4		
Melanthaceæ	4	2	...	1	...	..	1		
Smilaceæ	3	1	1	1					
Asparageæ	7	...	3	1	1	...	...	1	1
Junceæ	15	12	...	1	1	...	...	...	1
Cyperaceæ	25	18	1	2	2	...	1	...	1
Gramineæ	134	57	25	32	15	1	3	...	1
	1627	467	254	350	216	64	96	15	165
Dicotyledones	1338	349	208	280	186	61	82	13	159
Monocotyledones	289	118	46	70	30	3	14	2	6

It is obvious to all who have considered the subject, that a mere enumeration of the species known to exist in a given region gives of itself but little information as to the character of its flora; nevertheless the statistical method, to which somewhat too much importance has, in my opinion, been attributed, does lead towards some probable conclusions, and gives indications which may not be unimportant.

Taken as a whole, the figures in the preceding Table show very distinctly that the Marocco flora is altogether a portion of that great Mediterranean flora which, with local peculiarities, extends from the Indus to the Atlantic Islands. Excluding all the species widely spread beyond those limits either through the tropics or the temperate zone, we have remaining 1160 species, of which 820 are common to some considerable portions of the Mediterranean region. Of the remaining 340 species about one half, or 165, are peculiar to Marocco. Next come 96 common to Spain and Marocco, nearly all of these being, as far as we know, confined to the neighbourhood of Tangier and Tetuan. A much smaller proportion, only 64, are common to Algeria and Marocco, and only 15 species are confined to the Macaronesian Islands, under which name I include Madeira along with the Canary Islands. This proportion will doubtless be somewhat increased when we know more of the coast vegetation between Agadir and Wadnoun; but the figures tend to show that the separation of those islands must date from a period even geologically speaking remote.

With a view to exhibit further the characteristics of the Marocco flora it may be convenient to give a summary of the results of the foregoing Table, showing the absolute number of species or subspecies of each of the principal Natural Orders, and the percentage which they bear to the total number of Phanerogamic species, this being 1627.

	Total number of species.	Percentage proportion.
Dicotyledones	1338	82·2
Monocotyledones	289	17·8
Compositæ	208	12·8
Leguminosæ	189	11·6
Gramineæ	134	8·2
Umbelliferæ	86	5·3
Labiatæ	81	5·0
Cruciferæ	73	4·5
Caryophylleæ	69	4·2
Scrophularineæ	61	3·7
Liliaceæ	43	2·6
Boragineæ	35	2·2
Ranunculaceæ	33	2·0
Rubiaceæ	30	1·8
Cistineæ	28	1·7
Cyperaceæ	25	1·5
Euphorbiaceæ	24	1·5

It will be seen that the proportion of Compositæ, Leguminosæ, and Liliaceæ is unusually large, whilst that of Gramineæ and Ranunculaceæ is exceptionally small. Still more characteristic of the Marocco flora is the small proportion borne by some natural orders that usually take a prominent place among the vegetable population in mountain countries in the north temperate zone. Thus we have of Rosaceæ but 16 species, of Saxifrageæ 5 species, of Primulaceæ 7 species, of Gentianeæ 8 species, and of

Cyperaceæ only 25 species; and very few of these belong to subalpine or alpine types.

In my opinion, however, the general numerical results obtained from tabular statements, such as those I have already given, are very likely to mislead unless critically controlled. The boundaries of states are determined by historical accidents, and, to a slight extent only, by physical geography; and it often happens that in general summaries the characteristics of what form natural divisions of the earth's surface are masked by these being thrown in along with others wherein different conditions predominate.

Bearing in mind that the entire of Marocco in a botanical sense forms part of the Mediterranean region, it includes within its boundaries several provinces, partly corresponding to geographical limits, which exhibit well-marked features, and are distinguished by a considerable number of species not common to other provinces.

Speaking broadly, and excluding the wide-spread species, which belong to two types—1st, those widely spread through the cooler temperate zone, either Old World or extending to the New World, and, 2nd, tropical species which extend more or less widely into the warmer temperate regions—there are within the Marocco territory five elements, of which four correspond more or less closely to geographical limits.

The Mediterranean flora, including within that term species confined to that region and widely spread throughout it, forms what may be considered as the substratum extending throughout the whole territory, excepting only the higher range of the Great Atlas. Overlying, so to say, this substratum, we find in the northern extremity of Marocco a strong infusion of another element, which is now generally denominated the Peninsular flora. This is recognizable, even to the unscientific observer, by the number of conspicuous flowering shrubs, including, along with more wide-spread species of those genera, several showy species of *Cistus* and *Erica*, with numerous herbaceous plants, such as the curious *Drosophyllum lusitanicum*. We do not know the limits of this province along the coast between Tetuan and the Algerian frontier; but it does not seem to extend more than 30 or 40 miles southward from Tangier and Cape Spartel, and in point of fact nearly all the 96 species set down as common exclusively to Spain and Marocco have been found in the neighbourhood of Tangier and Tetuan, and are not seen in the central or southern provinces of Marocco.

The Algerian flora, so far as it offers special characteristics to distinguish it from the general Mediterranean type, owes its individuality mainly to species endemic in the mountain region of the Lesser Atlas, or on the high plateaux that present such a peculiar feature in the geography of Southern Algeria.

It is highly probable that most of these extend into Eastern and Central Marocco; but in the limited region known to us these characteristic species of the Algerian flora are for the most part wanting, and even in the Great Atlas but a small number of them have yet been seen.

Although several of the species characteristic of the Desert flora extend beyond their original boundary, and a few of them are found even in the south-east of Spain, there are few better-marked botanical provinces than that of the desert regions of Western Asia and Northern Africa. Considering the wide portion of the earth's surface occupied by the hot stony or sandy plains that extend with unimportant interruptions nearly from the banks of the Lower Indus to the Atlantic coast of Southern Marocco, the general uniformity of its scanty vegetable population is a fact very remarkable in botanical geography. Unfortunately our knowledge of the true desert-region of Southern Marocco, namely that which extends along the Southern side of the Great Atlas chain, is extremely limited; but when the collections recently received by M. Cosson from his collector are fully enumerated, it will be seen that many species of this peculiar type extend to within a few leagues of the Atlantic coast. But even in the low country, on the northern side of the Great Atlas, traversed by us there are some considerable tracts closely approximating in their physical conditions to the northern skirts of the Sahara. Many of the characteristic desert-species there reappear, although they are separated by lofty mountain-ranges from what may be considered their natural home.

The least-important element that goes to make up the Marocco flora, if we measure it by the number of representative species, but in some respects one of the most interesting, is that revealed by the presence of a small number of species common to the Maroccan and the Macaronesian* floras. Of these all but one are

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* I have ventured to use the name Macaronesia in a rather wider sense than some preceding writers, including under it Madeira with its dependent islets,

Canary-Island species, the remaining one being common only to Madeira and Western Marocco. It is true that the short list of fifteen species might be somewhat extended if we added certain species peculiar to Marocco but closely allied to Canary-Island endemic species. Such a list would include three cactoid Euphorbias, a *Sonchus* (*S. acidus*, nearly allied to *S. pinnatus*), a Senecio of the *Kleinia* group, and *Monanthes atlantica*, nearly allied to its Canary-Island congeners.

It must be remarked, however, that the types to which these last-mentioned species belong are rather generally West-African than specially Macaronesian, as all are common to the Cape de Verde Islands, if not to a wider region. Of the fifteen Macaronesian species found in the coast region of South Marocco, I think it is safe to say that the facts rather tend to show the accidental diffusion of a few Macaronesian species on the adjacent coast of Africa than to indicate the existence of a direct connexion between the continent and those islands within a geological period at all recent.

There remains to be considered the flora of the Great Atlas, the only one of the constituent portions of the general Marocco flora that seems to be confined within the boundaries of the empire. I am tempted to enter into some detail in discussing this part of my subject; but when I recollect what a large mass of additional unpublished matter is already in the possession of my friend M. Cosson, I feel that it would be unsatisfactory to attempt any such detailed discussion at the present time; and I hope to be able to resume the subject to greater advantage on a future occasion.

In the mean time it is allowable to point out some characteristic features of the Great-Atlas flora, as far as this is known to me from our collections. Dividing the mountain region into two zones, an upper and a lower one, and fixing the limit between them at about 1500 metres above the sea-level, I find in each of these a considerable number of endemic species, amounting in regard to the upper zone to about one fourth of the whole number of species. But there is little indication of that multiplication of specific forms that is so characteristic of the mountain-floras of

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along with the Canary-Island archipelago. Though the flora of Madeira be more limited than that of the Canaries, it is impossible to regard it as other than a detached member of that group.

Southern Spain, Greece, and Asia Minor. On the arenaceous and porphyritic rocks of the Aït Mesan valley we found to a great extent the same endemic species afterwards gathered on the schistose and calcareous rocks of Djebel Tezah, at least 30 miles distant.

Another fact worth noticing is, that, among a considerable number of new specific forms, no new generic type has yet been found in the Great Atlas.

But in my opinion the most singular point about the Great-Atlas flora is the presence of a large number of the common species of Central Europe, both annual and perennial, coupled with the fact that many of these are not species that have proved their power of adapting themselves to different climatal conditions, and that many of them have no nearer habitat than the mountains of Central or Southern Spain, while others must be sought at a still greater distance.

The conclusion to which I am led by a consideration of the facts is the same that I have derived from rather long observation of the mountain-vegetation of Central and Southern Europe—namely, that it is impossible to explain the facts without admitting that a large portion of our present flora is relatively very ancient, and that the species had assumed their present characters at least as early as the Miocene epoch.

I ought not to omit mentioning that two years after our visit two German naturalists, MM. Rein and Fritsch, were able to make a short expedition in the Great Atlas, nearly following our footsteps. They were not exclusively engaged in collecting plants; but they have deposited at Kew specimens of most, if not all, the plants found by them. Having been able to examine these, I have enumerated their specimens in the following catalogue.

In determining the specimens of our collections I have been materially assisted, in regard to the Orchideæ, by my friend Prof. H. G. Reichenbach. The friendly aid and assistance of Professor Oliver and Mr. J. G. Baker have been frequently invoked by me; and to the latter I am especially indebted for his thorough knowledge of the Liliaceæ and Amaryllideæ of the Mediterranean region, which he kindly contributed for my benefit. To Mr. Bentham, it is needless to say that in any case of doubt or difficulty I never applied in vain. The resources of his unequalled knowledge are always at the service of the younger and less-gifted workers in the field of science; and I cannot better close than by expressing the sense of affectionate regard with which I acknowledge his guidance.

ENUMERATIO GENERUM AC SPECIERUM.

Præmonenda.

Ordines naturales plantarum secundum normam Candolleanam a celebb. Bentham et Hooker reformatam enumeravi; generum definitiones a Bentham et Hooker in opere classico 'Genera Plantarum' stabilitas quatenus profuerunt fere semper secutus sum.

Nomina trivialia specierum antiquiora, nisi plane erronea, semper prætuli. Auctorem speciei, qui primus eam ab affinibus distinxit et publici juris fecit, esse duxi, et prius citavi. Auctores cæteros parce citavi, opus tamen cyclopædicum Candolleanum 'Prodromus Systematis Universalis,' necnon Kunthianum 'Enumeratio Plantarum,' semper adduxi.

Formas istas plantarum a speciebus affinibus notis evidentibus et satis stabilibus dignoscendas cujus tamen differentiæ tales sint ut una pro alterius prole habenda esse videatur, sicut subspecies enumeravi, et typis diversis eorum nomina a cæteris distinxi.

Territorium Imperii Maroccani in regiones quinque limitibus certis nondum definitas distinxi: scilicet 1. Marocco septentrionalis—ditionem Tingitanam et Tetuanensem necnom regionem litoralem inter hanc et fines Algerienses amplectens; 2. Marocco occidentalis—vel regio litoralis et sublitoralis Atlantica, ab urbi El Araisch usque Agadir; 3. Marocco centralis, botanicis fere ignotus, inter zonam sublitoralem et convallem fluminis Moulouya; 4. Marocco orientalis, regio vix nota inter flumen Moulouya et fines Algerienses; 5. Marocco meridionalis, quo comprehenditur catena centralis Atlantis Majoris et regio inferior a montium radicibus usque flumen Oum er bia. His addenda erit regio vasta desertorum, Sahara Maroccana dicta, ab Atlante Majore meridiem versus se protendens, quæ tamen species nullas operi nostro subministravit.

Locorum natalium plantarum quibus adest signum (!) testis ipse sum. Idem signum, dum sequitur nomina abbreviata, plantas indicat quarum specimina vidi et scrutavi. Horum sequitur brevis elenchus:

Webb. Herb.—Philippus Barker Webb. Stirpes circa Tingidem et Tetuan anno 1827 lectæ, in Herbario Florentino as, servatæ.

Salzm. Exsicc.—Salzmann. Plantæ in ditione Tingitana anno 1825 lectæ quarum series venales duæ in Herbario Kewensi asservantur.

Lowe.—R. T. Lowe. Plantæ in agro Mogadorensi anno 1859 lectæ, quarum catalogum in Actis Soc. Linnæanæ Londinensis edidit. Harum exemplaria fere omnium in Herbario Kewensi exstant.

Schsb. spec.—Plantæ olim a Schousboe lectæ, ex ejus herbario duplicatæ, a cel. Cosson benevole communicatæ.

Balansa spec.—Plantæ a cl. Balansa anno 1867 lectæ, quarum perpaucæ venales in Herbario Kewensi vel in cæteris herbariis inveniuntur.

J. D. H.—Plantæ quas in itinere Maroccano amicissimus Eques Josephus Dalton Hooker solus legit.

Coll. Indig.—Plantæ mense Majo 1871 a duobus indigenis in ditione Agadir lectæ, quarum exemplaria in herbario meo ac in Kewensi extant.

R. et Fr.—Plantæ a cll. Rein et Fritsch anno 1873 lectæ, quarum specimina in Herbario Kewensi conservantur.

RANUNCULACEÆ (*Juss. Gen.* 231).

CLEMATIS (*L. Gen.* 696).

C. FLAMMULA (*L., DC. Pr.* i. 2).
Mar. sept.—Tanger. (*Salzm. sp. in herb. nost.*)! Tetuan (1851)!
Mar. merid.—Ourika! Amsmiz!
Ar. Geog. Regio Mediterranea exclusa Macaronesia.

C. CIRRHOSA (*L., DC. Pr.* i. 9).
Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Blackmore*)!
Mar. occid.—Mogador (*Lowe*)!
Mar. merid.—Visa pr. Ourika!
Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia).

C. Balearica (*Rich, Journ. Phys.* 1779, 127; *DC. Prod.* i. 9),= C. polymorpha (*Viv. Fl. Cors.* p. 9), inclusa forma foliis minus profunde divisis *C. semitriloba* (*Lag. Cat. Matr.* 17).
Mar. occid.—Agadir (*Coll. Indig.* 1871)!
Ar. Geog. Insul. Mediterraneæ (Baleares, Corsica, Sicilia). Marocco occidentalis.
A plerisque botanicis cum præcedente conjuncta, sed formæ intermediæ vix inveniendæ. Confer Boissier in Fl. Or. i. 2. Mihi videtur melius ad subspeciem reducenda. Specimina ex monte supra Agadir a cel. Cosson benevole communicata ad var. seu lusum *C. semitrilobam* pertinent.

THALICTRUM (*L. Gen.* 697).

T. GLAUCUM (*Desf. Cat. H. Par.* ed. 2, p. 126; *DC. Pr.* i. 15).
Mar. merid.—Mesfioua!
Ar. Geog. Penins. Iberica. Africa boreali-occidentalis. In Italia erronee indicatum.

ANEMONE (*L. Gen.* 694.).

A. PALMATA (*L., DC. Pr.* i. 19).
Mar. sept.—Tanger, in monte Djebel Kebir! Tetuan, in monte Beni Hosmar, usque 400 m.!
Ar. Geog. Penins. Iberica. Africa boreali-occidentalis.

ADONIS (*L. Gen.* 698).

A. AUTUMNALIS (*L., DC. Pr.* i. 23).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)!
Mar. merid.—Prov. Haha!
Ar. Geog. Europa media. Regio Mediterranea omnis (exclusa Macaronesia).
Specimina nostra carpellorum juniorum rostro uncinato referunt *A.*

bœticam (Coss. Not. Crit. Plant. d'Esp. ii. 25), quæ mihi videtur var. *A. autumnalis*.

ADONIS ÆSTIVALIS (*L.*, *DC. Pr.* i. 24).
Mar. merid.—Shedma! Amsmiz! Sektana!
Ar. Geog. Europa media (vix indigena?). Regio Mediterranea (Europa, Oriens, Africa borealis). Mont. Himalaya.
Variat in reg. nostra petalis sanguineis vel citrinis.

A. MICROCARPA (*DC. Syst.* i. 223, *DC. Pr.* i. 24), = A. Cupamana, *Guss. Syn. Fl. Sic.* ii. 36), = A. intermedia (*Webb, Phyt. Can.* i. 12).
Mar. merid.—Sektana!
Ar. Geog. Penins. Iberica; Sicilia. Afr. borealis. Macaronesia.
Petala in. spec. nostris citrina.

—— ——, var. A. DENTATA = A. dentata (*Del. Fl. Eg. Ill.* 17; *DC. Pr.* i. 24).
Mar. merid.—Sheshaoua!
Ar. Geog. Syria; Arabia; Persia. Africa borealis in reg. Saharensi.
In hoc genere species plurimæ extricatu difficillimæ et forsan non satis constantes.

RANUNCULUS (*L. Gen.* 699).

R. AQUATILIS (*L.*, *DC. Pr.* i. 26).
Mar. sept.—Tanger! Inter Tetuan et Ceuta!
Mar. merid.—Amsmiz!
Ar. Geog. In reg. temperata et frigida hemisph. borealis (Europa, Asia, Africa, Macaronesia, et America). Rarius occurrit in Asia subtropica.

R. Baudotii (*Godr. Monog.* p. 14, fig. 4), = Batrachium marinum (*Fr. Nov. Fl. Suec. Mant.* iii. 51).
Inter specimina nostra Tingitana video examplaria quæ verisimiliter huc spectant. Habuerim pro varietate speciei polymorphæ (*R. aquatilis*) sed auctoritate tantorum virorum devinctus hanc in numerum subspecierum enumerare malui.
Ar. Geog. Gallia; Insul. Britannicæ. Batavia. Ditio Tingitana.

R. FICARIA (*L.*, *B. et H. Gen. Pl.* i. 6.), = Ficaria ranunculoides (*Mnch. Meth.* 215; *DC. Pr.* i. 44).
Mar. sept.—Inter Tanger et Tetuan! In monte Beni Hosmar prope Tetuan!
Ar. Geog. Europa borealis et media et Mediterranea. Marocco septentrionalis.

—— ——, var. INTERMEDIUS, *nob.*
Mar. sept.—In monte Djebel Kebir prope Tanger!

R. calthæfolius (Jordan, Obs. vi. 2), = Ficaria calthæfolia (*Reich. Fl. Exc.* ii. 718), a planta Linnæana statura et floribus duplo majoribus facile dignoscendus, foliis profunde cordatis, lobis incumbentibus adeo ut primo intuitu peltata videntur, nobis non obvia fuit in itinere Maroccano. Varietas supra memorata gaudet floribus aliquid majoribus, foliis paullo profundius cordatis, sed typo Linnæano multo propior est quam *R. calthæfolio*, Jord.

Quoad sciam *R. Ficaria*, L., hucusque extra territorium Europæ non citatur.

RANUNCULUS BULLATUS (*L., DC. Pr.* i. 27).

Mar. sept.—Tanger! folia tantum visa.

Mar. occid.—Mogador (*Brouss. sec. Boissier*).

Ar. Geog. Regio Mediterranea australior e Creta usque in Lusitaniam.

R. CHÆROPHYLLOS (*L., DC. Pr.* i. 27), var. γ FLABELLATUS, *DC. l. cit.* = R. flabellatus (*Desf. Fl. Atl.* i. 438, tab. 114).

Mar. sept.—Valde frequens in regione collina circa Tanger! et Tetuan! et in monte Beni Hosmar, usque 800 m.! Variat caule simplici vel ramoso (usque 12-floro), foliis radicalibus integris ternatis vel biternatis.

Ar. Geog. Species per regionem Mediterraneam (exclusa Macaronesia) et montes Himalaya diffusa.

R. leucothrix (*Ball, Journ. Bot.* 1873, 296).

Inter priorem et *R. oxyspermum* (Steph. in Willd. Sp. Pl. ii. 1328, DC. Pr. i. 28) collocandus; *R. chærophyllo* propior et sicut subspecies enumerandus. Differt imprimis grumis cylindricis, nec ovatis, indumento ex pilis longis villosis inferne patulis superne adpressis, nec brevi adpresso sericeo, pedicellis fructiferis rigidioribus subincrassatis, foliorum tripartitorum segmento medio longiore sæpe tripartito calyce fructifero persistente reflexo.

Mar. merid.—In regione inferiore Atlantis (Distr. Rerava) circ. 1000 m.!

Petala subemarcida quam in typo minora; carpella immatura fere omnia abortiva.

A *R. chærophyllo* facie valde diversus, et forsan pro specie omnino distincta habuerim, si specimina meliora adfuissent. Calyx sub anthesi reflexus est in hoc genere nota specifica gravis momenti.

R. SPICATUS (*Desf. Fl. Atl.* i. 438, tab. 115; *DC. Pr.* i. 29).

Mar. sept.—In monte Beni Hosmar prope Tetuan circ. 900 m.!

Ar. Geog. Africa borealis. Lusitania?

In speciminibus nostris spica fructifera quam in spec. Algeriensibus paullo brevior.

—— ——, var. R. BLEPHARICARPOS, = R. blepharicarpos (*Boiss. El.* 5).

Mar. merid.—In regione subalpina Atlantis Majoris, Djebel Tezah circ. 2600 m.!

Ar. Geog. Peninsula Iberica. Marocco meridionalis. Speciminibus Nevadensibus a nobis lectis omnino conformis.

R. GRAMINEUS (*L., DC. Pr.* i. 32).

Mar. sept.—In monte Beni Hosmar prope Tetuan circ. 1000 m.!

Ar. Geog. Europa occidentalis et australis, nullibi frequens. Marocco septentrionalis. Extra Europam non prius detectus?

RANUNCULUS ATLANTICUS (*Ball, Journ. Bot.* 1873, p. 296).

Subspecies *R. acris* (*L., DC. Pr.* i. 36) sed formæ intermediæ nondum observatæ?

Inter subspecies et varietates *R. acris* distinguitur imprimis statura maxima 3–5-pedali, corolla (pro grege) maxima, rhizomate crasso horizontali fibras validas emittente, foliis magnis pentagonis profunde 3- vel 5fidis, segmentis incisis, indumento sericeo-piloso adpresso, præsertim in foliorum pagina inferiore (folia igitur bicoloria). Carpella parva numerosa rostrata, rostro subrecto longiusculo.

Mar. merid.—Frequens in convallibus septentrionalibus Atlantis Majoris —Urika! Reraya! Ait Mesan! Amsmiz! a 1000 m. ad 1900 m.

Huic proximus est *R. Friesianus*, Jord. Obs. vi. p. 17, = *R. nemorivagus*, Jord. Diagn. i. p. 74.

In regione Mediterranea *R. acris* est fere semper planta montana, et vix in zonam olivetorum se protendit. *R. atlanticus* noster non fugit loca calidiora.

R. PALUSTRIS (*L., DC. Pr.* i. 41), var. MACROPHYLLUS, = R. macrophyllus (*Desf. Fl. Atl.* i. 437), = R. villosus (*Salzm. Exsicc. non DC.*).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Prope Cap. Spartel! Tetuan 1851! In monte Beni Hosmar!

Ar. Geog. Africa borealis. Formæ seu varietates arcte affines proveniunt in Lusitania (Brot. Fl. Lus. sub *R. adscendente*), in Hispania (*Boiss. Voy.*), in Sardinia (*Moris. Fl. Sard.*), in Corsica (*DC.* fl. fr. sub *R. corsico*) et in Oriente (*Boiss. Fl. Or.*).

Planta Fontanesiana differt ab orientali foliis minus profunde divisis, pedunculis fructiferis crassioribus. Ab his paululum differt planta Europæ australis foliorum lobo medio longiore, rostro apice subrecurvato.

R. procerus (*Moris, Fl. Sard.* i. 45; *Icon.* tab. 2)?

Mar. sept.—Tanger (*Webb Herb.*)!

Ar. Geog. Sardinia. Ager Tingitanus.

A *R. palustri*, cui simillimus, differt carpellis etiam junioribus tuberculoso-setigeris. De differentia specifica dubitavit ipse beatus Moris; nobis videtur ad subspeciem reducendus.

R. BULBOSUS (*L., DC. Prod.* i. 41), var. NEAPOLITANUS, = R. Neapolitanus (*Ten. Syll.* p. 272).

Mar. merid.—In regione media Atlantis Majoris; in convalle Amsmiz circ. 1500 m.! in monte Djebel Tezah usque 2000 m.!

Ar. Geog. Italia; Sicilia?; Corsica; Hispania (*Bourg. Pl. d'Esp.* no. 2249). Oriens (*Boiss. Fl. Or.*). Marocco meridionalis.

A typo facile dignoscitur rhizomate parum incrassato fibras plurimas crassas edente, sed pace cel. Boissier carpella habet *R. bulbosi*, rostris brevissimis plus minusve arcuatis.

Confer notulam MS. beati J. Gay, et frustulum ex exemplari authentice Tenoreano herb. Desfontaines, in Herb. Kew conservata. Meo sensu *R. neapolitanus* est omnino forma meridionalis *R. bulbosi* et verisimiliter per totam regionem Mediterraneam diffusus.

—— ——, var.? GIGANTEUS, *nob.* 5-pedalis et ultra; rhizoma incrassatum; foliorum radicalium petioli 2-pedales; folia pinnatipartita, segmenta trisecta, varie incisa; flores *R. bulbosi.* Carpella desunt.

Mar. merid.—In regione inferiore Atlantis secus torrentem Ourika!

R. rhœadifolius (DC. Syst. i. 284) ex descript. celeb. auctoris nostræ plantæ haud absimilis, sed ex icone in Delessert Icon. i. 40, hic mihi videtur forma *R. philonotidis*, Retz, seu *R. trilobi*, Desf.; sed ob defectum carpellorum res incerta manet. Planta nostra est fere certe *R. bulbosi* forma insignis.

RANUNCULUS PHILONOTIS (*Retz, Obs.* vi. 3; *DC. Pr.* i. 41), var. INTERMEDIUS, *nob.*=R. intermedius (*Poir. Dict.* vi. 116)?

Mar. sept.—Tanger!

Ar. Geog. Hinc inde in regione Mediterranea?

R. trilobus (*Desf. Fl. Atl.* i. 437, tab. 113; *DC. Pr.* i. 42).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb. herb.*)! Tetuan secus ripas fluminis (1851)!

Mar. merid.—Sektana!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Pace auctorum celebb. qui *R. trilobum* pro specie probe distincta enumerarunt hic mihi mera forma *R. philonotis* videtur, et nisi obstitisset auctoritas majorum pro varietate potius quam pro subspecie habuerim. Notæ diagnosticæ ex carpellis desumptæ non gravis momenti videntur. In *R. philonoti* vulgari carpella ostendunt tubercula circa marginem concentrice disposita, sed hæc non raro omnino desunt. In *R. trilobo* tubercula crebriora sunt sed secundum eandem normam distribuuntur. Varietas nostra supra memorata, quæ verisimiliter est *R. intermedius*, Poir., habitu et corolla est *R. philonotis*, sed glabritie et carpellis propius accedit *R. trilobo*.

R. ARVENSIS (*L., DC. Pr.* i. 41).

Mar. merid.—In regione inferiore et media Atlantis Majoris; in convalle Aït Mesan circ. 1200 m.! et usque 2200 m!

Ar. Geog. Europa media, Asia borealis (*Gmel.*). Regio Mediterranea omnis. Montes Himalaya.

R. MURICATUS (*L., DC. Pr.* i. 42).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb. herb.*)! Prope Cap. Spartel!

Mar. merid.—In regione inferiore et media Atlantis Majoris. Reraya circ. 1100 m.! Amsmiz! Djebel Tezah usque 1750 m.!

Ar. Geog. Regio Mediterranea omnis. India boreali-occidentalis. America borealis et Meridionalis (vix indigenus?).

RANUNCULUS PARVIFLORUS (*L., DC. Pr.* i. 42).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Vidimus in sepibus haud procul a Tanger! et in dumosis montis Djebel Kebir!

Mar. merid.—In reg. inferiora Atlantis Majoris. distr. Reraya! Ex prov. Mtouga specimina nana attulerunt R. et Fr.

Ar. Geog. Europa occidentalis ex Hibernia ad fretum Herculis. Europa australis, ager Byzantinus. Africa boreali-occidentalis. Macaronesia. America borealis.

R. OPHIOGLOSSIFOLIUS (*Vill. Dauph.* iv. 732, tab. 49; *DC. Pr.* i. 43).

N.B. In exemplari nostro operis Villarsii anno 1789 impressi inventum III. 731.

Mar. sept.—In uliginosis pr. Tanger! (*Salzm. Exsicc.*)

Ar. Geog. Europa occidentalis ex Sarnia ad Lusitaniam. Regio omnis Mediterranea. Formæ affines in America boreali (*R. pusillus,* Poir.), et in America meridionali (*R. bonariensis,* Poir.).

In regione subalpina Atlantis Majoris (in convalle Aït Mesan circ. 2550 m. loco frigido uliginoso) invenimus *Ranunculum* nondum florentem, rhizomate brevi recto, fibris validis elongatis (6–10-pollicaribus) præditum. Folia radicalia sunt glabra, pinnatim trisecta, lobis cuneato-ovatis, in pagina superiore albo variegata. Eandem plantam florentem ex reg. superiore Atlantis anno 1873 attulerunt cll. Rein et Fritsch. In hac scapus solitarius superne adpresso-pilosus, folium unicum subsimplex gerens, petala lutea mediæ magnit., carpella (nimis immatura) rostrata, rostro spiraliter recurvo.

Est verisimiliter nova species e grege *R. montani,* W., et proxima *R. procumbenti* (Boiss., Ann. Sc. Nat., et Fl. Or. i. 51).

NIGELLA (*L. Gen.* 685).

N. ARVENSIS (*L., DC. Pr.* i. 49).

Mar. merid.—Aïn Tarsil, prov. Mtouga!

Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia).

—— ——, var. COSSONIANA, *nob.* = N. hispanica, var. parviflora (*Coss. Pl. Crit.* 49).

Mar. occid.—Prope Mogador! et Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Prov. Shedma pluribus locis! Prov. Mtouga (*R. et Fr. spec.*)!

Ar. Geog. Gallia australis. Hispania. Africa borealis.

Cel. Boiss. (in Fl. Or. i. 66) sub *N. arvensi* plurimas sic dict. species adunavit et sicut varietates descripsit; scil. *N. tuberculata,* Gris. Spic., *N. aspera,* C. Koch., *N. fœniculacea,* DC., *N. divaricata,* Beaupre in DC. Syst., *N. cretensis,* Stev., *N. aristata,* Sibth. et Sm., sed revera vix pro varietatibus habendæ sunt. *N. arvensis,* L., est enim species summopere ludibunda, per totam regionem Mediterraneam (exclusa Macaronesia) late diffusa, et rarius invenies specimen typo unius alteriusve formæ descriptæ omnino conveniens.

Cel. Cosson loc. cit. plantam nostram a *N. arvensi* distinxit et pro varietate *N. Hispanicæ* suæ vindicavit. Sed vir oculatissimus limites frustra quæsivit, dum natura invicta obstat. Forma et color sepalorum, ratio inter se labiorum petali, carpella extus plus minusve glanduloso-rugosa, horum rostra erecta, vel patentia, vel recurva, sunt omnes notæ variabiles, sicut jam me docuerunt specimina plurima Maroccana in vivo observata. Nec valet nota diagnostica a cll. Gr. et God. (Fl. Fr. i. 45, 46) proposita. In *N. arvensi* nervi laterales carpelli basin usque rarius producti; dum in *N. Hispanica* rostrum semper trinerve est, nervi in dorso carpelli haud raro producti.

N. Hispanica a, Cosson, *l.c.,* in Hispania Gaditana haud infrequens (Bourgeau, Pl. d'Esp. 1849, No. 13, et a me olim prope Vejer et pr. Zahara lecta), statura maxima, sepalis illis *N. arvensis* 2–3ve majoribus, basi vix attenuatis, pro subspecie habenda videtur. Hæc in ditione Maroccana nondum detecta fuit. Specimina nostra ex Agadir et prope Mogador lecta gaudent floribus quam in *N. arvensi* typica paullo majoribus. Hæc forma prope Mogador a Balansa lecta sistit verisimiliter *N. Hispanicam,* var. *intermediam* (Coss., Index in Bull. Soc. Bot. Fr.).

NIGELLA DAMASCENA (*L., DC. Pr.* i. 49), forma spontanea floribus minoribus = *N. Bourgæi,* Jord. pug.

Mar. sept.—Tetuan (*Webb. herb.*) !

Mar. occid.—Agadir (*Coll. Indig.* 1871) !

Mar. merid. In prov. Shedma! et Haha (*J. D. H.*) !

Ar. Geog. Regio Mediterranea occidentalis. Europa. Afr. borealis. Macaronesia. In Oriente vix indigena?

AQUILEGIA (*L. Gen.* 684).

A. VULGARIS (*L., DC. Pr.* i. 50) var.?

Mar. merid.—In monte Djebel Tezah circ. 1800 m. legit *J. D. H.*

Ar. Geog. Europa borealis (excl. arctica), et media, et australis (in umbrosis montanis). Macaronesia. In Asia temperata et in mont. Himalaya. Formæ affines in America boreali.

Stirps polymorpha et miro modo ludibunda. Specimina nostra gaudent foliis radicalibus triternatis, foliolis profunde incisis, omnibus glabrescentibus, petiolis longis, caule bipedali superne ramoso, floribus minoribus viridi-flavescentibus. Tota planta (foliis exceptis) pube brevi non viscosa prædita. Carpella desunt. Experientia docebit an varietas sit, vel subspecies nomine novo salutanda.

DELPHINIUM (*L. Gen.* 681).

D. AJACIS (*L., DC. Pr.* i. 51).

Mar. merid.—Mesfioua !

Ar. Geog. Europa meridionalis, Macaronesia (an indigenum ?).

Legi specimen unicum valde incompletum, et ideo minus certum.

D. HALTERATUM (*Sibth. et Sm. Fl. Gr.* vi. tab. 107; *Boiss. Fl. Or.* i. 86, et forsan *DC. Pr.* i. 53).

Mar. sept.—Tanger (*Salzm. Exs.* sub *D. junceo*) ! (*Webb. herb.*) !

Mar. occid.—Agadir (*Coll. Indig.* 1871) !

Mar. merid.—Sat frequens in regione inferiore. Prov. Haha ! Shedma ! Mtouga !

Ar. Geog. Regio Mediterranea. Europa. Africa borealis. Formæ affines in Oriente.

—— ——, var. CARDIOPETALUM, = D. cardiopetalum (*DC. Syst.* i. 347).

Mar. sept.—Tanger ! Tetuan (anno 1851)! Forma elata, racemo laxo, foliis rigidis.

Mar. occid.—In monte Djebel Hadid ! prope Aïn el Hadjar !

Ar. Geog. Gallia; Hispania. Africa borealis.

—— ——, var. MACROPETALUM, = D. macropetalum (*DC. Syst.* i. 350).

Mar. occid.—Frequens in arenosis prope Mogador ! ubi legerunt etiam Broussonet, Schousboe, Lowe, et Balansa.

Ar. Geog. Hucusque nonnisi pr. Mogador detectum.

Primo aspectu a *D. halterato* et formis affinibus differt floribus duplo majoribus, pedunculis longioribus, foliorum segmentis latioribus. Caracteres stabiles frustra quæsivi dum hæ notæ omnes variabiles sunt. Vix aut ne vix quidem a *D. obcordato*, DC. Syst. Nat. i. 350, ex specimine manco in 'Barbaria' lecto a cl. Durand descripto, diversum est.

Nihil dubito quin *Delphinia* omnia § *Delphinellum*, DC., regionis Mediterraneæ (exclusis orientalibus et *D. Balansæ*) cum *D. peregrino*, L., nexu genetico colligari, et pro subspeciebus vel varietatibus enumeranda esse. *D. halteratum* dignoscitur petalorum lateralium lamina orbiculari basi rotundata vel leviter obcordata. *D. junceum* (DC. Fl. Fr. v. 364, et Prod. i. 52) habet laminam ellipticam in unguem attenuatam. Foliorum forma, indumentum, ratio longitudinis calcaris et sepalorum notæ sunt omnino variabiles. Formæ arcte affines in tota regione Mediterranea (exclusa Macaronesia) vulgares sunt.

DELPHINIUM, sp. nov.? Forsan subspecies *D. Balansæ* (Boiss. et Reut. Diagn. Pl. Or., ser. 2, v. 12)?

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan supra Arround ad 2400 m.! In monte Djebel Tezah 2300–2500 m.!

Stirpem nondum florentem incertæ sedis inter *Delphinia* (suadente cl.

Baker) retuli; accuratius visa affinis *D. Balansæ* mihi videtur, sed pluribus notis differt. Radix perennis lignosa, plerumque obliqua; caules florigeri e basi procumbente adscendentes; folia radicalia et inferiora palmatim (nec pinnatim) partita, caulina magis divisa subbiternata; indumentum *D. Balansæ*.

DELPHINIUM PENTAGYNUM (*Lam. Dict.* ii. 264; *DC. Pr.* i. 54).

Mar. occid.—In monte Djebel Hadid haud procul a Mogador. *R. et Fr. spec. in Herb. Kew.*!

Ar. Geog. Peninsula Iberica. Africa borealis. Sicilia = *D. emarginatum* (Presl, Bert. Fl. It. v. 419).

Pace beati Bertoloni planta Algeriensis (Desf. Fl. Atl. i. 427, tab. 111) est certe non diversa a stirpe Calpensi quæ Maroccanis conformis. Specimina lusitanica non vidi, sed *Lam. l. c.* plantam lusitanicam sub oculis habuit, et eandem speciem descripsit (confer *Brotero, Fl. Lus.* ii. 304) quam pro *D. emarginato*, Psl. habuit auctor Fl. Italicæ. Notæ diagnosticæ mihi videntur incertæ et variabiles.

BERBERIDEÆ (*Vent. Tabl.* iii. 83).

BERBERIS (*L., Gen.* 442).

B. CRETICA (*L., DC. Pr.* i. 106), var. = B. Hispanica (*B. et R. Pug.* 3)?

Mar. merid.—In regione subalpina Atlantis Majoris. In monte Djebel Tezah (*J. D. H.*)!

Ar. Geog. Hispania. Africa boreali-occidentalis. Forma arcte affinis in Oriente et in insulis Italicis Corsica, Sardinia, Sicilia (*B. Ætnensis*, Presl).

Specimina nostra inter *B. creticam* et *B. cratægina*m, DC., ambigua videntur sed propiora plantæ Nevadensi (olim *B. vulgaris*, L., var. *australis*, Boiss. = *B. Hispanica*, B. et R.). Folia subintegerrima in ramis fertilibus spinas subæquantia, in sterilibus (hornotinis?) duplo longiora. Baccæ nigro-cæruleæ stigmate breviter stipitato coronatæ. *B. cretica*, L., cum *B. cratægina*, DC., et *B. densiflora*, Boiss. et Buhse, melius sicut subspecies *B. vulgaris* enumerandæ videntur.

PAPAVERACEÆ (*Juss. Gen.* 235).

PAPAVER (*L. Gen.* 648).

P. HYBRIDUM (*L., DC. Pr.* i. 118).

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Tam in planitie, prov. Shedma! et prope Marocco! quam in reg. inferiore Atlantis. Aït Mesan!

Ar. Geog. Europa media. Regio Mediterranea omnis.

P. DUBIUM (*L., DC. Pr.* i. 118), var. *Maroccanum*, nob.

Mar. sept.—Tanger! Inter Tetuan et Ceuta!

Mar. occid.—Casa Blanca!

Differt a typo foliis radicalibus pinnatis, caulinis integris basi latis subamplexicaulibus inæqualiter incisis vel crenato-incisis, interdum subtrilobis, pilosis vel subglaberrimis. Quoad foliorum formam videtur a *P. dubio* prorsus diversum et potius ad *P. gracile* (Boiss. Fl. Or. i. 115) accedens, sed formæ intermediæ non desunt.

P. dubium est species per totam Europam late diffusa, nec deest in regione Mediterranea (inclusa Macaronesia). In India boreali-occidentali adest forma glabra (*P. dubium β. lævigatum,* Elk. Mon.) quæ forma, monente Boissier (Fl. Or. i. 114), ab ipso Elkan cæterisque auctoribus cum *P. lævigato,* M. B., perperam confusa est. Vereor ne caracteres a disci crenis incumbentibus vel inter se discretis a cel. Boissier allati, in hac grege fallaces sint. In stirpe nostra crenæ disci interdum incumbentes fere ut in *P. Rhœas.*

PAPAVER RHŒAS (*L., DC. Pr.* 118).

Mar. sept.—Tanger !

Mar. occid.—Mogador (*Lowe*); Agadir (*Coll. Indig.* 1871) !

Mar. merid.—Hinc inde in planitie Maroccana—Shedma ! Sheshaoua ! Pr. urbem Marocco ! Formam nanam parvifloram legi pr. Sektana !

Ar. Geog. Europa media. Regio Mediterranea omnis.

P. TENUE (*Ball, Journ. Bot.* 1873, 296).

Annuum (seu bienne ?); planta tota pilis longis setosis vestita (folia inferiora et sepala interdum glabrescentia); folia primaria pinnata, pinnis inciso-lobatis segmentis rotundatis, caulina circuitu late triangulari-ovata, bipinnatifida, segmentis lineari-oblongis acutis; caulis subsimplicis setæ inferiores patulæ, superiores adpressæ; petala obovato-oblonga; discus convexiusculus capsulæ glabræ obovato-turbinatæ latitudine vix æqualis, crenatus, crenis vix incumbentibus; stigmata 6–7.

Mar. merid.—In regione media et superiore Atlantis Majoris, in convalle Aït Mesan ! et in jugo Tagherot ! a 1800 m. ad 3000 m., in convalle Amsmiz ! et in monte Djebel Tezah ! a 1600 m. ad 2500 m.

Proximum *P. arenario,* M. B., at differt petalis angustis nec subrotundatis, setis caulinis adpressis nec patulis, cæterisque notis. Capsula fere *P. Decaisnei,* Hochst. et Steud., sed in hoc discus complanatus, crenæ magis discretæ.

P. SOMNIFERUM (*L., DC. Pr.* i. 119), var. SETIGERUM, = P. setigerum (*DC. Fl. Fr.* v. 585; *DC. Pr.* i. 119).

Mar. sept.—Tanger, versus Cap. Spartel (*Webb. herb.*) !

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. In regione Mediterranea hinc inde, sed patria incerta.

P. somniferum colitur, et sæpe cum seminibus affertur in Imperio Maroccano, et ex cultis evadit forma sylvestris, *P. setigerum,* sed verisimiliter haud indigenum est.

PAPAVER RUPIFRAGUM (*Boiss. et Reut. Pug.* p. 6), var. ATLANTICUM (*Ball, Journ. Bot.* 1873, 296).

Perenne, cæspitosum; rhizoma multicaule; folia (fere omnia radicalia) setis longis albidis dense obtecta, circuitu obverse lanceolata, grosse dentata vel pinnatipartita, segmentis inæqualibus plus minusve incisis; caulis scapiformis, 8–20-pollicaris, simplex vel ima basi furcatus, adpresse setosus; flores ante anthesin nutantes; petala late obovata, sordide aurantiaca; capsula clavata, glabra, ima basi (ad petalorum insertionem) annulo glandulifero instructa; discus convexus, crenatus, capsulæ latitudinem superans.

Mar. merid.—In regione subalpina Atlantis Majoris; Aït Mesan! Djebel Tezah! a 2000 m. ad 2600 m.

Aspectu a planta Boissieriana diversissima; hæc enim obscure virens subglaberrima, dum varietas nostra canescens undique pilosissima, forsan melius pro subspecie habenda.

P. rupifragum est species distinctissima, hucusque tantum in Hispania Arundana detecta.

RŒMERIA (*Med. in Ust. Ann.* 1792, 15).

R. HYBRIDA (*DC. Syst.* ii. 92, *et Prod.* i. 122, *L.* sub *Chelidonio*).

Mar. merid.—In regione inferiore Atlantis Majoris. Pr. Sektana circ. 1200 m.! In convalle Amsmiz, circ. 1500 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). In Europa media vix indigena.

Siliquæ in spec. nostris aliquid attenuatæ fere ut in *R. rhœadiflora*, Boiss.

GLAUCIUM (*Scop. Fl. Carn.* ed. 2, i. 369).

G. LUTEUM (*Scop. l. c.*),=G. flavum (*Ctz. Fl. Aust.* i. 141; *DC. Pr.* i. 122),=G. fulvum (*Lois. Fl. Gall.* i. 376; *DC. Pr.* i. 122),=Chelidonium glaucium, *L.*

Mar. sept.—Legi nondum florens in arenosis maritimis inter Tetuan et Ceuta!

Ar. Geog. Europa borealis et media. Regio Mediterranea omnis (inclusa Macaronesia).

G. CORNICULATUM (*L.*, sub *Chelidonio, Curt. Lond.* vi. tab. 32; *DC. Prod.* i. 122).

Mar. occid.—In prov. Haha prope Mogador! (*Schsb.*) et prope Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Prov. Shedma! Mesfioua! Seksaoua!

Ar. Geog. Germania. Regio Mediterranea (exclusa Macaronesia).

HYPECOUM (*L. Gen.* 171).

H. PENDULUM (*L., DC. Pr.* i. 124).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Amsmiz, circ. 1400 m.! Prope Mzouda, *J. D. H.*!

Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia).

CORYDALIS (*DC. Fl. Fr.* iv. 636; *Benth. et H. fil. Gen. Pl.* i. 55).

C. HETEROCARPA (*Durieu in Parl. Giorn. Bot.* i. 336, sub *Ceratocapno*), =Ceratocapnos umbrosa (*Dur. in Walp. Ann.* ii. 29).

Mar. occid.—Prope Mogador (*Lowe Cat.*).

Mar. merid.—In regione inferiore Atlantis Majoris, in convalle Aït Mesan detexit G. Maw!

Ar. Geog. Africa borealis. Hucusque nonnisi in Algeria detecta.

De genere *Ceratocapno* confer B. & H. *l. c.* p. 56. A *Corydali claviculata*, cui simillima, differt fructu dimorpho. Superiores cujusvis racemi capsulæ 1–2-spermæ, bivalves, in rostrum longum cornuto-recurvum attenuatæ; inferiores nuces indehiscentes, monospermæ, compressæ, truncatæ, fenestrato-sulcatæ. Nomen specificum a clar. inventore prius editum, aptum et nullomodo mutandum.

FUMARIA (*L. Gen.* 849).

F. AFRICANA (*Lam. Dict.* ii. 569),=F. corymbosa (*Desf. Act. Soc. Hist. Nat. Par.* i. 26, tab. 6; *DC. Pr.* i. 130; *Ol. Ham. Mon.* 42).

Mar. sept.—In rupibus juxta Tetuan florentem et fructiferam legi mense Junio 1851 et iterum Aprili 1871!

Ar. Geog. Hispania Granatensis; Africa borealis. Species sat rara.

F. OFFICINALIS (*L., DC. Pr.* i. 130; *Ol. Ham. Mon.* 9).

Mar. merid.—In regione media Atlantis Majoris, in convalle Aït Mesan a 2000 m. ad 2200 m.!

Ar. Geog. Patria verisimiliter regio Mediterranea. Nunc fere cosmopolita per Europam, Asiam, Africam borealem (inclusa Macaronesia), Americam tam borealem quam meridionalem late diffusa.

F. VAILLANTII (*Lois. Not.* p. 102; *DC. Pr.* i. 130; *Ol. Ham. Mon.* 14).

Mar. merid.—In regione inferiore Atlantis majoris pr. Tasseremout!

Ar. Geog. Europa et Asia temperata; regio Mediterranea (inclusa Macaronesia); India orientalis (*sec. Ol. Hammar*).

Notæ quibus hæc et sp. sequens dignoscuntur ex fructu desumptæ vix stabiles sunt. Fructus *F. parvifloræ* in Marocco rarius apiculatus.

F. PARVIFLORA (*Lam. Dict.* ii. 567; *DC. Pr.* i. 130; *Ol. Ham. Mon.* 16).

Mar. occid.—Casa Blanca!

Mar. merid.—Sat frequens in planitie et in regione inferiore Atlantis Majoris. Prov. Shedma, pluribus locis! Prope urbem Marocco! In convalle Aït Mesan, *J. D. H.*! In convalle Amsmiz circ. 1500 m.!

Ar. Geog. Europa media (vix indigena?). Regio Mediterranea omnis, unde in Americam subtropicam (Mexico, *sec. Parlatore*, Buenos Ayres, *herb. Hooker*) et in Indiam boreali-occidentalem effugit.

In spec. Maroccanis flores sæpissime albi, rarius dilute rosei.

FUMARIA CAPREOLATA (*L., DC. Pr.* i. 130; *Ol. Ham. Mon.* 24), var. **CONDENSATA**, *nob.*

Mar. merid.—Ad radices Atlantis Majoris. Frequens circa Amsmiz! Mzouda! Keira!

Ar. Geog. F. capreolata per Europam fere totam et regionem Mediterraneam (inclusa Macaronesia) late diffusa est, et inde in Americam extratropicalem aufuga. De distributione formarum seu varietatum ardua sententia et forsan inutilis est.

Var. nostra est forma parviflora, racemis densis, et forsan cum var. γ, *albiflora*, Ol. Ham. l. c. conjungenda.

F. media (*Lois Not.* 102; *Ol. Ham. Mon.* 28, *non DC. Syst. nec Prod.*), var. α, *Ol. Ham. l. c.*,=F. Boræi (*Jord. Cat. Jard. Bot. Gren.* 1849),=F. Munbyi (*Bois. et Reut. Pug.* p. 5),=F. capreolata (*Eng. Bot.* tab. 943, et auct. Brit. fere omnium).

Mar. sept.—Circa Tanger! Prope Tetuan, anno 1851!

Ar. Geog. Europa occidentalis a Norvegia ad fretum Herculis. Africa boreali-occidentalis ab agro Tingitano ubi valde frequens usque Oran. Huc verisimiliter referenda est *F. capreolata* (Salzm. Exsicc.).

F. media est nobis subspecies cum *F. capreolata* pluribus formis intermediis conjuncta.

—— ——, var., cui proxima F. SEPIUM (*Boiss. Diagn. Pl. Or.* ser. 2, i. 16; *Ol. Ham. Mon.* 27).

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan 1700–1800 m.!

Var. nostra inter formas intermedias enumeranda quibus adsocianda est *F. sepium*, Boiss. Habet sepala magna corollæ dimidium subæquantia, subintegra, basi leviter dentata, et bracteas pedicellis apice valde incrassatis æquilongas.

F. MACROSEPALA (*Bois. El.* p. 8; *Ol. Ham. Mon.* 36).

Mar. sept.—In monte Beni Hosmar legi specimen mancum mox floribundum! In eodem monte olim legit beatus P. B. Webb.

Ar. Geog. Hispania Granatensis et Gaditana. Montes Tetuanenses.

Species rara, verisimiliter probe distincta.

F. AGRARIA (*Lag. El. Pl. Hort. Matrit.* 1816, p. 21; *Ol. Ham. Mon.* 38),=F. media (*DC. Syst.* ii. 134; *et Prod.* i. 130, *non Lois.*).

Mar. sept.—Tanger (*Salzm. Exsicc. sub* F. media)! Tetuan!

Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe*). Agadir (forma fl. minoribus, *Coll. Indig.* 1871)!

Ar. Geog. Regio Mediterranea Europæ et Africæ borealis. Deest in Oriente et in Macaronesia. Ex Europa in Americam australem allata.

—— ——, var. **ELATA**, *nob.*, an *F. rupestris*, var. *laxa* (Boiss. et Reut. Pug. p. 4)?

Mar. sept.—In rupibus calcareis pr. Tetuan!

Mar. merid.—Prov. Haha! Shedma! Prope Marocco!

F. rupestris (B. et R. *l. c.*; Ol. Ham. Mon. 40), mihi videtur forma rupestris *F. agrariæ*, et var. *laxa* est ejusdem forma sylvestris scandens.

Var. nostra differt a typo sepalis longius acuminatis apice subherbaceis, fructu insigniter compresso et carinato.

—— ——, var. ATLANTICA, *nob.*

Mar. merid.—In regione media Atlantis Majoris. Aït Mesan circ. 1600 m.!

Planta haud omnino certa—facies *F. capreolatæ*, sed characteres potius *F. agrariæ*; a priore differt sepalis multo latioribus. Multis notis, et foliorum segmentis subflabellatis, ad *F. flabellatam* accedit, sed bracteæ duplo longiores, ut in *F. rupestri*, et pedicelli erecto-patuli nec reflexi.

F. flabellata (Gasp., Rendic. Ac. Sc. Nap. i. 51; Ol. Ham. Mon. 41) verisimiliter ut subspecies *F. agrariæ* enumeranda erit.

Fumaria tenuisecta (*Ball, Journ. Bot.* 1873, 297).

Affinis *F. agrariæ*, sed insigniter differt sepalis angustis minimis acutis dentatis diametrum fructus non attingentibus; a *F. judaica*, Boiss., petalis multo majoribus, et ab omnibus hujus gregis valde ludibundi foliis tripinnatisectis in lacinias lineares planas mucronatas dissectis.

Mar. merid.—In regione inferiore Atlantis majoris in convalle Aït Mesan ad 1400 m. specimen unicum legi!

Invito animo novam subspeciem proposui pro hac stirpe singulari. Folia fere *F. Kralikii*, Jord.

CRUCIFERÆ (*Juss. Gen.* 237).

MATTHIOLA (*R. Br. in H. Kew.* iv. 119).

M. TRISTIS (*R. Br. l. c.* p. 120; *DC. Pr.* i. 134).

Mar. occid.—Mogador (*Lowe*).

Ar. Geog. Europa mediterranea. Africa borealis. In Asia Minore rarior. Macaronesia (*sec. Lowe*).

M. TRICUSPIDATA (*R. Br. l. c.*; *DC. Pr.* i. 134).

Mar. sept.—In arenosis maritimis inter Tetuan et Ceuta!

Ar. Geog. Per oras maris Mediterraneæ late diffusa. In littoribus Atlanticis Europæ et Africæ hucusque non indicata.

M. PARVIFLORA (*R. Br. l. c.*; *DC. Pr.* i. 135).

Mar. merid.—Frequens in incultis saxosis calidioribus. Aïn Oumast! Misra ben Kara! Gurguri! Mtouga! Mskala! Prope urbem Marocco (*Schsb. spec.*)!

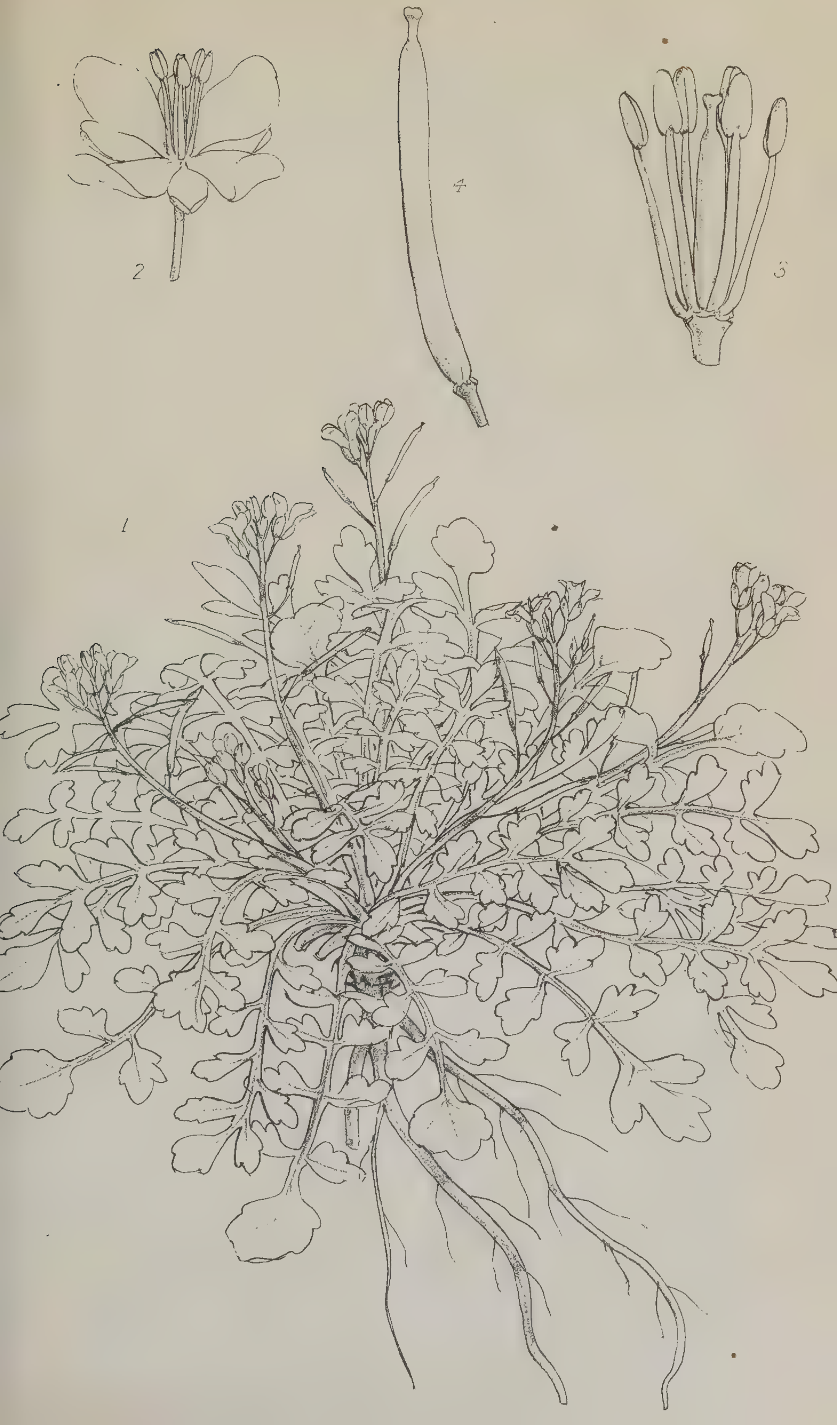
Ar. Geog. Hispania; Marocco; Macaronesia.

In Marocco fit sæpe robustior, sesquipedalis et ultra.

CHEIRANTHUS (*R. Br. in H. Kew.* iv. 118).

C. SEMPERFLORENS (*Schousb. Gew. in Marok.* p. 181; *DC. Pr.* i. 136).

Mar. occid.—Frequens in arenosis circa Mogador! ubi jam legerunt Broussonnet, Schousboe, Lowe et Balansa. Inde se protendit usque radices montes Djebel Hadid ad Aïn el Hadjar!



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NASTURTIUM ATLANTICUM, *Ball.*

Ar. Geog. Species Maroccana e grege Macaronesiaco *Dicroantho*, Webb, sed satis diversa. Specimen mancum sub hoc titulo, ex Mostaganem in herb. Kewensi est aliena planta. Semina immatura tenuiter marginata.

NASTURTIUM (*R. Br. in H. Kew.* iv. 109).

N. OFFICINALE (*R. Br. l. c.*; *DC. Pr.* i. 137).
Mar. sept.—Tanger!
Mar. occid.—Mogador (*Lowe Cat.*).
Mar. merid.—In regione inferiore Atlantis Maj. pr. Amsmiz, *J. D. H.*! et in subalpinis supra Arround circ. 2400 m.!
Ar. Geog. Herba amphigæa, in temperatis, frigidioribus et calidioribus hemisphæræ borealis frequens.

N. ATLANTICUM (*Ball, Journ. Bot.* 1873, 297). (Plate IX.)
Bienne (?), cæspitosum, glaberrimum, ex collo radicis longæ verticalis caules breves debiles emittens; folia (fere omnia basilaria) profunde pinnatipartita, lobo terminali anguloso-rotundato, lateralibus inæqualibus, spathulatis vel oblongo-ellipticis, angulatis; pedicelli breves graciles, non incrassati; petala parva, ochroleuca; siliqua (immatura) lævis, subtorulosa, enervis; stylus apice subclavatus.
Mar. merid.—In regione superiore Atlantis Majoris—Aït Mesan supra Arround! Tagherot! a 2200 m. usque 2800 m.
Ab affinibus (*N. asperum*, Boiss. (*Sisymbrium*, L.; DC. Prod.) et *N. Boissieri*, Coss.) differt imprimis habitu et foliis diversissimis, floribus minoribus, ochroleucis (fere albidis) nec flavis, pedicellis gracilibus nec incrassatis, siliqua enervi, nec ut in illis valvæ basi nervo notata. Stylus longitudine variabilis.

ARABIS (*L. Gen.* 818).

A. VERNA (*R. Br. in H. Kew.* iv. 105; *DC. Pr.* i. 142, *L.* sub *Hesperide*).
Mar. sept.—In monte Beni Hosmar! In eodem monte et in Djebel Dersa olim legit Webb!
Ar. Geog. Regio Mediterranea, exclusa Macaronesia.

A. ALBIDA (*Stev. Cat. H. Gor.* 51; *DC. Pr.* i. 142).
Mar. merid.—In reg. subalpina Atlantis Majoris, in ascensu jugi Tagherot versus 2600 m.! Fere eodem loco, anno 1873, specimen mancum legerunt R. et Fr.!
Ar. Geog. Montes regionis Mediterraneæ, sed deest in Gallia et in peninsula Iberica. In Italia media (territ. Lucensi) descendit in zonam *Oleæ Europææ*. In montibus ins. Teneriffa a 2200 ad 2700 m. se tenet.
Beatus P. B. Webb (in Phyt. Can. i. 63) et cel. Boissier (in Fl. Or. i. 174) plurimas sic dict. species orientales *A. albidæ* rite conjunxerunt,

scil. *A. caucasica* (W. Enum. Supp. 45), *A. viscosa* (DC. Syst. ii. 216), *A. thyrsoidea* (Sibth. et Sm. Fl. Gr. tab. 642), *A. longifolia* (DC. Syst. ii. 219), *A. brevifolia* (DC. Syst. ii. 218), *A. Billardieri* (DC. Syst. ii. 218). Ab his omnibus specimina atlantica discrepant foliis inferioribus, et caudiculorum profunde sinuatis vel repando-dentatis, caulinis etiam magis profunde dentatis.

Procul dubio est forma *A. alpinæ* sed satis constans et ideo pro subspecie habenda.

ARABIS ERUBESCENS (*Ball, Journ. Bot.* 1873, 297).

Stirps male cognita e grege *A. alpinæ* sed cum ea confundi nequit. Ab hac differt insigniter sepalis basi æqualibus coloratis, petalis dimidio minoribus erubescentibus, eorum lamina angustiore, pilis caulinis simplicibus vel apice furcatis, nec stellato-ramosis.

Mar. merid.—In regione alpina Atlantis Majoris. In jugo Tagherot, ultra 3000 m., specimen unicum immaturum et incompletum legi!

A. AURICULATA (*Lam. Dict.* i. 219; *DC. Pr.* 143).

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan supra Arround a 2400 m. ad 2550 m.! In jugo Tagherot usque 2800 m.! In monte Djebel Tezah a 2500 m. ad 2800 m.!

Ar. Geog. Europa media. Montes regionis Mediterraneæ, exclusa Macaronesia.

Specimina in monte Djebel Tezah lecta habent siliquas breviores. Nonnulla (versus 2800 m. lecta) sunt tenuiora pauciflora, fere var. β *Sinaica* (Boiss. Fl. Or. i. 169).

A. PUBESCENS (*Poir. Suppl.* i. 413; *DC. Pr.* i. 145),=Turritis pubescens (*Desf. Fl. Atl.* ii. 92, tab. 163).

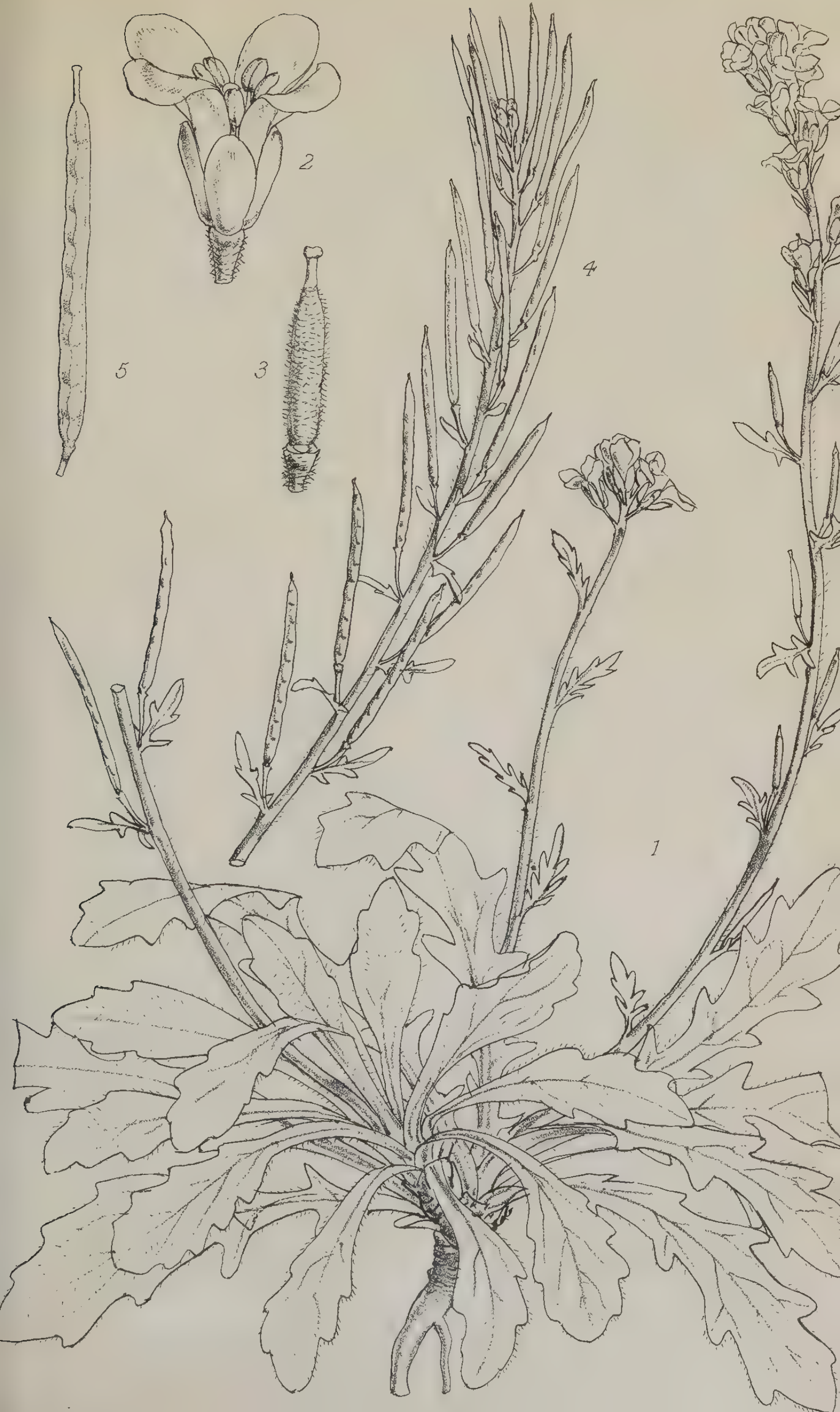
Mar. sept.—In monte Beni Hosmar! et in rupibus calcareis pr. Tetuan! ubi eam olim legit P. B. Webb.

Ar. Geog. Species propria Algeriæ et montium Tetuanensium.

Siliquæ erectæ strictæ subsessiles pubescentes, valvis dorso obsolete 1-nervosis, in stylum attenuatæ. Semina uniseriata exalata. Stigma bifidum.

A. decumbens (*Ball, Journ. Bot.* 1873, 297). (Plate X.)

Perennis, cæspitosum, e collo radicis caules plurimos debiles decumbentes emittens; folia radicalia obverse lanceolata, acute repando-dentata, in petiolum attennata, caulina ovato-lanceolata, profunde dentata, suprema linearia subintegra, omnia ex pilis rigidis trifurcatis scabriuscula; pedicelli filiformes, patentes, siliquæ $\frac{1}{4}$ partem æquantes; petala alba seu dilute carnea; siliquæ compressæ subtorulosæ erecto-patentis valvæ margine parum incrassatæ, dorso obsolete nervosæ; stylus filiformis, glaber, pro genere longiusculus; stigma vix (aut ne vix) bifidum.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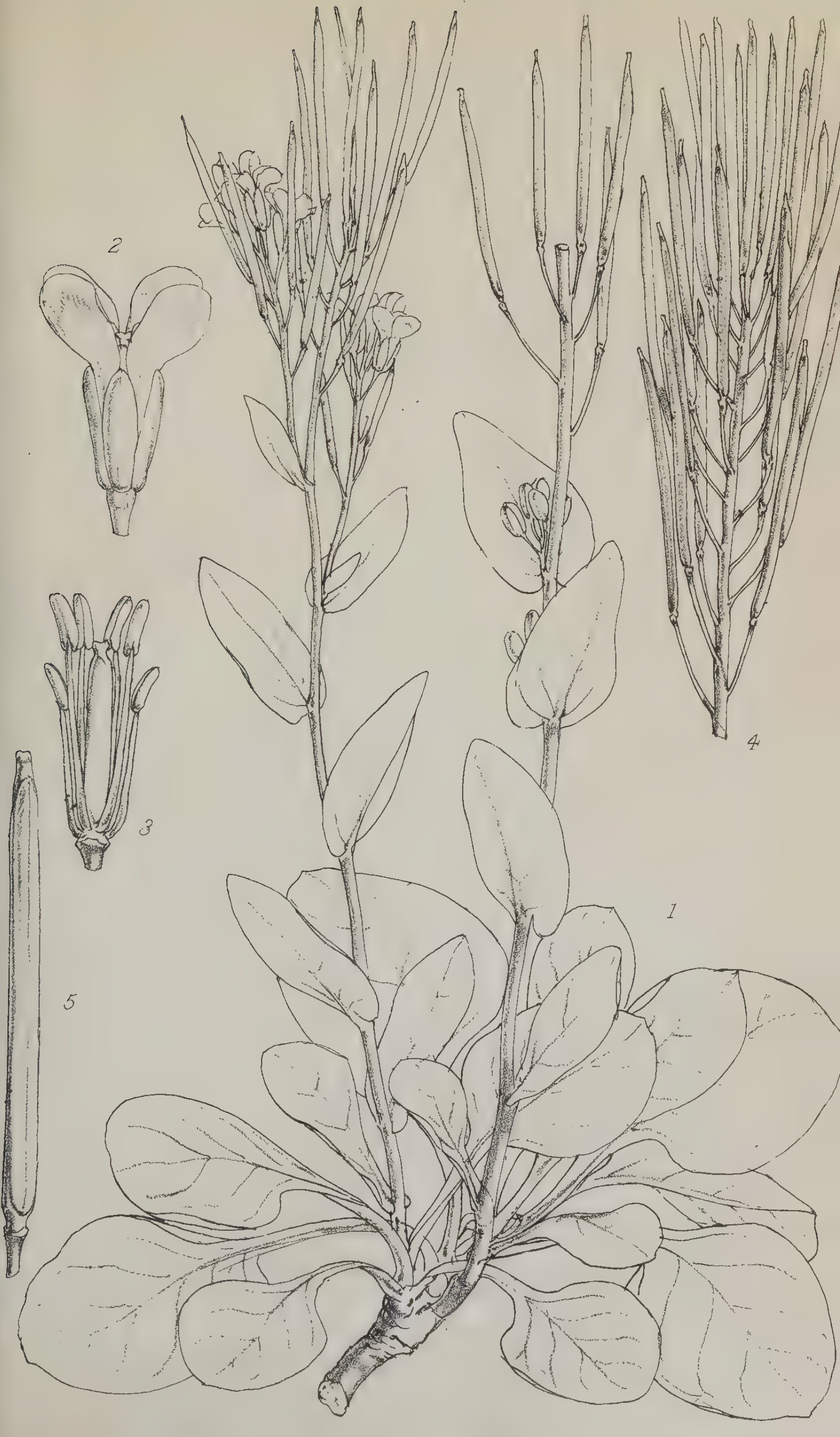
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Mar. merid.—In regione subalpina Atlantis Majoris—Aït Mesan, supra Arround! a 2100 m. ad 2600 m. Djebel Tezah! a 2400m. ad 2500 m.

Differt ab *A. pubescente*, cui proxima, habitu omnino diverso, pedicellis patentibus nec adpressis, siliquis magis torulosis, stylo longiore basi discreto. Tabula Fontanesiana *A. pubescentis* habet siliquas truncatas, stylo subnullo præditas; in speciminibus nostris prope Tetuan lectis video siliquas semper in stylum attenuatas.

Arabis conringioides (*Ball, Journ. Bot.* 1873, 297). (Plate XI.)

Radix lignosa, perennis, caules plurimos erectos, subsimplices, foliatos emittens; herba tota glaberrima, glaucovirens; folia inferiora orbiculata, in petiolum longum sensim attenuata, caulina inferiora elliptica, basi auriculata, auriculis subangulatis, superiora ovato-cordata, semiamplexicaulia, omnia integerrima; pedicelli numerosi, conferti, filiformes, erecto-patuli, siliquæ $\frac{1}{3}$ vel $\frac{1}{4}$ partem æquantes; calyx basi subæqualis, sepalis purpurascentibus; petala alba, apice rotundata in unguem sensim attenuata, suberecta; siliqua erecta, elongata, lævis, subcylindrica, nervo dorsali subobsoleto notata, in stylum brevem truncatum attenuata; semina 1-seriata.

Mar. merid.—In regione alpina et subalpina Atlantis Majoris—in jugo Tagherot! a 3000 m. ad 3500 m.; in monte Djebel Tezah! a 2100 m. ad 2800 m.

Species distinctissima, nulli proxima, facie *Conringiæ orientalis* sive *C. clavatæ*, Boiss.

Cardamine (*L. Gen.* 812).

C. hirsuta (*L.*, *DC. Pr.* i. 152).

Mar. sept.—Tanger (in monte Djebel Kebir)! In umbrosis collium inter Tanger et Tetuan! In monte Beni Hosmar pr. Tetuan!

Ar. Geog. Regiones temperatæ hemisphæræ borealis. Per regionem Mediterraneam (exclusa Macaronesia) late diffusa.

—— ——, var. sylvatica, = C. sylvatica (*Lk. in Hoffm. Phyt. Bl.* i. 50).

Mar. sept.—In monte Beni Hosmar pr. Tetuan circa 1000 m.!

Mar. merid.—In regione subalpina Atlantis Majoris—in monte Djebel Tezah circa 2200 m.!

Ar. Geog. Europa borealis et media (excl. arctica). Montes Hispaniæ et Italiæ, sed verisimiliter rara in reg. Mediterranea.

Notoceras (*R. Br. H. Kew.* iv. 117).

N. canariense (*R. Br. l. c.*; *DC. Pr.* i. 140).

Mar. sept.—Tetuan (*Webb Herb.*)!

Mar. merid.—Inter Misra ben Kara et Marocco!

Ar. Geog. Regio Mediterranea calidior a Belutschia usque in insulas Canarienses. India boreali-occidentalis.

ALYSSUM (*L. Gen.* 805; *H. et B. Gen. Pl.* i. 73).

A. ALPESTRE (*L., DC. Pr.* i. 161), var. SERPYLLIFOLIUM = A. serpyllifolium (*Desf. Fl. Atl.* ii. 70).

Mar. merid.—In regione media et superiore (?) Atlantis Majoris. In convalle Aït Mesan circa 1400 m. florens et fructiferum legi 15 Majo 1871! Ejusdem stirpis specimen mancum legerunt in jugo Tagherot cl. Rein et Fritsch anno 1873! Denuo cel. Cosson benevole communicavit specimina in monte Djebel Afougueur ab indigena Ibrahim lecta mense Junio 1874!

Ar. Geog. A. alpestre est species polymorpha in montibus Europæ mediæ et regionis mediterraneæ late diffusa. Var. nostra montium peninsulæ Ibericæ et Africæ borealis incola est.

Forma Fontanesiana a nobis lecta vix differt ab *A. alpestre*, var. *β. suffrutescens* (Boiss. Fl. Or. i. 268). Hujus (monente cel. Boissier) synonyma sunt *A. tortuosum β. orientale* (DC., Prod. i. 164), *A. Savranicum*, Andr., et *A. serpyllifolium* (Griseb. Spic. i. 276).

—— ——, var. MACROSEPALUM (*Ball, Journ. Bot.* 1873, 298).

Differt a typo sepalis majoribus subpersistentibus siliculam semimaturam æquantibus, siliculis basi ellipticis, nec cuneatis, stylo siliculam subæquante.

Mar. merid.—In regione media Atlantis Majoris, in convalle Amsmiz!

A. MONTANUM (*L., DC. Pr.* i. 162), var. ATLANTICUM, *nob., an Boiss.*? =A. atlanticum (*Desf. Fl. Atl.* ii. 71, tab. 149; *DC. Pr.* i. 161).

Mar. merid.—In regione subalpina et alpina Atlantis Majoris. In monte Djebel Tezah a 2500 m. usque 3300 m.!

Ar. Geog. Varietas nostra habitat in montibus Africæ borealis et forsan Hispaniæ Granatensis. Formæ arcte affines per Europam mediam et regionem Mediterraneam (exclusa Macaronesia) diffusæ.

Specimina nostra bene convenient spec. in monte Djebel Cheliah Algeriæ lectis (*Balansa, Pl. d'Algérie*, No. 898). Ab icone Fontanesiana differre videntur caulibus subprostratis, et sepalis persistentibus. Specimina Hispanica quæ vidi et ipse legi fructifera in montibus Sierra Nevada ad aliam formam hujus speciei polymorphæ pertinere videntur. In his caules erecti rigidiusculi, planta tota ex squamis stellatis multiradiatis lepidotis dense incana. In spec. ab ipso Boissier in Sierra de Mijas anno 1837 lectis filamenta majora alata, nec dentata ut in *A. montano* typico, et in pl. nostra.

A. montanum est certe species polymorpha quibus adsociandæ sunt velut varietates vel subspecies plurimæ ab auctoribus jam descriptæ, et formæ non paucæ hucusque ineditæ. Inter varietates cum *A. atlantico*, Dsf., enumeranda sunt *A. diffusum*, Ten., et *A. repens*, Baumg. Subspecies, notis stabilioribus agnoscendas, sistunt *A. flexicaule*, Jord., *A. cuneifolium*, Ten., et *A. Wulfenianum*, Bernh. Hoc novissimum, in Alpibus Carnicis et Juliis sat frequens, non habet siliculas semper glabratas.

Hæ, pace cel. Boissier, non raro sunt squamis lepidotis adspersæ, basi tamen semper cuneata, stylo longiore, ab illis *A. montani* genuini dignoscendæ.

ALYSSUM CAMPESTRE (*L.*, *DC. Pr.* i. 163).

Mar. merid.—In planitie, unde se protendit usque in regionem subalpinam Atlantis Majoris. Prov. Shedma! Tasseremout! Aït Mesan circ. 1400 m.! et iterum ad 2300 m.!

Ar. Geog. Europa media. Regio Mediterranea omnis (exclusa Macaronesia).

A. CALYCINUM (*L.*, *DC. Pr.* i. 163).

Mar. merid.—Rarius occurrit in planitie et in regione subalpina Atlantis Majoris. Prov. Shedma, prope Aïn Oumast In convalle Aït Mesan ad 1200 m. et in jugo Tagherot usque 2700 m.!

Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia).

In calidioribus fit plantula subsimplex erecta 2–3-pollicaris; in frigidioribus e basi ramosissima subcæspitosa.

A. SPINOSUM (*L.*, *DC. Pr.* i. 164; *Boiss. Voy. Esp.* ii. 45, sub *Ptilotricho*).

Mar. merid.—Crescit abunde in regione subalpina et alpina Atlantis Majoris in convalle Aït Mesan a 2200 m. usque 3300 m.

Ar. Geog. Regionis Mediterraneæ pars occidentalis, e Gallia Narbonensi ad Sierra Nevada; et in Africa boreali-occidentali. In Macaronesia deest.

A. MARITIMUM (*Lam. Dict.* i. 98; *DC. Pr.* i. 164; *Desv. Journ. Bot.* iii. 162, sub *Lobularia*; *R. Br. in Clapp. Voy. App.* p. 214, sub *Kœniga*).

Synonyma Linnæana confusa. Est enim *Clypeola maritima* (L. Mant. 426), et *Alyssum halimifolium* (L. Sp. Pl. ii. 207), et *A. minimum*, L., Sp. Pl. ii. 908).

Mar. sept.—Frequens pr. Tanger! (*Salzm. Exsicc.*)! prope Tetuan! Legi etiam in monte Beni Hosmar! ubi jam legerat Webb.

Mar. occid.—Djebel Hadid haud procul Mogador, *J. D. H.*!

Mar. merid.—In regione inferiore Atlantis Majoris—pr. Milhain!

Ar. Geog. Regio Mediterranea littoralis (inclusa Macaronesia).

—— ——, var. LEPIDOIDES, *nob.*

Differt a typo habitu graciliore, siliculis minimis in racemo confertis, nec ut in typo racemo basi laxo.

Mar. merid.—Ad radices Atlantis Majoris, supra Seksaoua! et in prov. Mtouga!

A. LIBYCUM (*Viv. Pl. Lib.* p. 34, tab. 16, sub *Lunaria*; *R. Br. in Clapp. Voy. App.*, sub *Kœniga*).

Mar. occid.—Mogador in arenosis! (*Lowe Cat.*) et in rupibus insulæ! Prope Aïn el Hadjar!

Ar. Geog. Regio Mediterranea calidior imprimis occidentalis (Hispania australis, Africa boreali-occidentalis, Macaronesia). Nascitur etiam in Persia australi et in Arabia Petræa.

DRABA (*L. Gen.* 800).

D. HISPANICA (*Boiss. El.* p. 8, *et Voy. Esp.* tab. 13; *Walp. Rep.* i. 147).

Mar. merid.—In regione superiore Atlantis Majoris legimus in monte Djebel Tezah a 2100 m. ad 3000 m.!

Specimina nostra ab exemplaribus Hispanicis et Algeriensibus paululum recedunt siliculis ovatis stylum versus attenuatis, minus hispidis (interdum glabrescentibus), pilis semper simplicibus, nec pilis ramosis commixtis, petalis minoribus styli longitudinem vix attingentibus.

Ar. Geog. Hispania Granatensis, Africa borealis.

Formæ arcte affines per montes Europæ meridionalis, Asiæ minoris et Syriæ diffusæ.

EROPHILA (*DC. Syst.* ii. 356).

E. VULGARIS (*DC. l. c.*; *DC. Pr.* 172),=Draba verna, *L.*

Mar. sept.—In monte Beni Hosmar pr. Tetuan!

Ar. Geog. Europa omnis (excl. arctica). Oriens. Africa borealis, ubi rara. In Macaronesia non indicata.

MALCOLMIA (*R. Br. in H. Kew.* iv. 121).

M. LITOREA (*R. Br. l. c.*; *DC. Pr.* i. 187).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. occid.—Casa Blanca (*R. et Fr. spec. in Hb. Kew.*)!

Ar. Geog. Litora Oceani a Cherbourg usque ad fretum Herculis. Secus mare Mediterraneum in Hispania et Hetruria. Africa boreali-occidentalis.

M. LACERA (*L. Sp.* 926, sub *Cheirantho*; *Lam. Dict.* iii. 332, sub *Hesperide*; *DC. Syst.* ii. 445, *et Prod.* i. 188), var. PATULA,=M. patula, (*DC. Syst.* ii. 444, *et Prod.* i. 187).

Mar. occid.—Valde frequens in arenosis prope Mogador! et in reg. litorea usque Aïn el Hadjar!

Ar. Geog. Hispania centralis. Ager Mogadorensis. Arcte affinis *M. laceræ* habitat in reg. litorali Lusitaniæ et Hispaniæ meridionalis.

Huc verisimiliter specimina a Broussonnet in agro Mogadorensi lecta quæ ill. A. P. De Candolle sub *M. lacera* (Syst. *l. c.*) disposuit. Re vera *M. lacera* et *M. patula* sunt formæ ejusdem speciei. In hac folia linearia integra, in illa oblongo-linearia, pinnatifido-sinuata. Ab his differt *M. Broussonnetii* stylo basi scabrido, foliis sæpe latioribus integris, vel breviter repando-dentatis; nec video aliam notam diagnosticam. In omnibus stylus filiformis elongatus, apicem versus glaber, vel tenuissime papilloso-scaber.

—— ——, var. BROUSSONNETII, = M. Broussonnetii (*DC. Syst.* ii. 445, *et Prod.* i. 184; *Deless. Icon. Sel.* ii. tab. 60).

Mar. occid.—In arenosis pr. Mogador! (*Brouss.*) *DC. l. c.* Inter Shedma et Mogador legit G. Maw et specimina pulchra mihi benevole dedit!

Mar, merid.—Prope Mesfioua unicum specimen legi!

Ar. Geog. Nimis incerta, vix ultra territ. Maroccanum.

M. Broussonnetii est *M. patulæ* forma vegetior, sæpius statura major, ramis rigidioribus, floribus majoribus. In spec. nostris tamen flores paullo minores quam in icone Delessertiana. Quid sit *M. Broussonnetii* auct. Floræ Hispanicæ est mihi res dubia. Specimina sub hoc titulo a Boissier et Reuter prope Gibraltar anno 1837 lecta, et quæ ipse legi anno 1871, mihi videntur magis affinia *M. litoreæ*, et forte ejusdem varietas foliis profunde sinuatis. An diversa sit *M. erosa* (Lag. Cat. Hort. Matr. 1814, p. 20, sub *Hesperide*, DC. Syst. ii. 446) ex descriptione incompleta non satis apparet.

M. NANA (*DC. Syst.* ii. 486, *et Prod.* i. 195; *Coss. in Bull. Soc. Bot. Fr.* x. 397, sub *Sisymbrio, Boiss. Fl. Or.* i. 222), = M. binervis (*Boiss. Ann. Sc. Nat.* 1842, 71), = Sisymbrium binerve (*C. A. M. Enum.* p. 189; *Jaub. et Sp. Ill. Pl. Or.* tab. 289), = Hesperis ramosissima (*DC. Prod.* i. 189), = M. confusa, *Boiss. Fl. Or.* i. 221.

Mar. sept.—Specimina duo semipollicaria florentia detexi inter cæspites gramineæ cujusdam in saxosis prope Tetuan lectæ!

Ar. Geog. Species per regionem Mediterraneam fere omnem late dispersa. In Gallia meridionali, in Italia, Græcia, et in Africa boreali hinc inde occurrit. In litore Maris Caspii legerunt Hohenacker, C. A. Meyer, et Buhse; et in maritimis Anatoliæ (suadente Boissier) olim legit Tournefort.

Pace cel. Boissier differentiæ inter *M. nanam* et *confusam*, Boiss., omnino instabiles sunt.

Speciminibus ad Mare Caspium prope Baku lectis plantulæ nostræ adamussim conveniunt nisi stylo aliquantulum breviore. Distributio hujus speciei, forsan ex statura minima a viatoribus prætermissæ, admodum singularis.

SISYMBRIUM (*All. Fl. Ped.* i. 274).

S. OFFICINALE (*L.*, sub *Erysimo, Scop. Fl. Carn.* ii. 20; *DC. Pr.* i. 191).

Mar. sept.—In calcareis prope Tetuan! et in monte Beni Hosmar!

Ar. Geog. Europa media et borealis (excl. arctica). Regio Mediterranea (inclusa Macaronesia). In Americam advecta.

S. IRIO (*L., DC. Pr.* i. 192).

Mar. sept.—Tanger (*Schsb. sec. Cosson*). Visum pr. Tetuan!

Mar. occid.—Casa Blanca!

Mar. merid.—Sheshaoua! Inter rudera urbis Marocco!

Ar. Geog. Europa occidentalis a Britannia ad fretum Herculis. Regio Mediterranea (inclusa Macaronesia). India boreali-occidentalis.

SISYMBRIUM THALIANUM (*Gay in Gaud. Fl. Helv.* iv. 348; *L. et DC.*, sub *Arabide*).

Mar. merid.—In regione subalpina Atlantis Majoris, in monte Djebel Tezah a 2100 m. ad 2300 m.!

Ar. Geog. Europa omnis (inclusa arctica). Sibiria. Regio Mediterranea (excl. Macaronesia).

S. RUNCINATUM (*Lag. Fl. Hisp. ined.*; *DC. Pr.* i. 194).

Mar. orient.—Maharoug (*Warion*), *Coss. Index.*

Ar. Geog. Hispaniæ prov. Murcia. Africa borealis.

—— ——, var. HIRSUTUM, *nob.*, = S. hirsutum (*Lag., DC. Pr. l. c.*)

Mar. merid.—In regione inferiore Atlantis Majoris, in convalle Amsmiz circa 1500 m. specimen unicum legi exemplaribus Hispanicis prope Matritum lectis omnino conforme.

Ar. Geog. Hucusque nonnisi in agro Matritensi et in Atlante Majore detectum.

S. ERYSIMOIDES (*Desf. Fl. Atl.* ii. 84, tab. 158; *DC. Pr.* i. 195).

Mar. merid.—Sat frequens in ruderatis et locis saxosis reg. inferioris. Prov. Shedma! Aïn Beida! in ruderatis urbis Marocco! Seksaoua! Milhain! et alibi visum.

Ar. Geog. Regio Mediterranea imprimis occidentalis, scil. Macaronesia, Hispania australis, Africa boreali-occidentalis, Sardinia; deinde occurrit in Persia australi et Arabia et in Abyssinia. Deest ut videtur in Italia continentali, Græcia, Asia Minore, Syria et Ægypto.

Specimina in solo arido crescentia graciliora sunt, sed vix pro varietate habenda.

ERYSIMUM (*L. Gen.* 814).

E. AUSTRALE (*Gay, Erysim. Diagn.* p. 6),=F. pallens (*Boiss. Voy. Esp. in Add.* p. 716), var. GRANDIFLORUM,=E. grandiflorum (*Desf. Fl. Atl.* ii. 85),=E. longifolium (*DC. Syst.* ii. 504, *et Prod.* i. 199).

Mar. merid.—In regione media et superiore Atlantis Majoris a 1900 m. usque 3000 m. In convalle Aït Mesan unde se protendit usque in jugo Tagherot! In monte Djebel Tezah! Specimina in monte Djebel Afougueur (*Coll. Indig. Ibrahim*) siliquis maturis (nobis prius deficientibus) mense Augusto 1874 lecta, benevole comm. cel. Cosson!

Ar. Geog. Var. nostra montium Africæ borealis et Hispaniæ incola est. Formæ arcte affines per Europam mediam et totam regionem Mediterraneam (exclusa Macaronesia) diffusæ.

Inter tot tantosque viros rei Botanices expertissimos qui genus *Erysimum* tetigerunt sententiæ omnino discordes. Invita natura characteres stabiles frustra quærunt, et limites certos indicare conantur in catena formarum affininium quam maxime proximarum.

In speciminibus nostris folia sæpius anguste linearia sed interdum latiora, semper tamen integerrima. Pedicelli sæpissime calycis longitudinem dimidiam attingentes, sed interdum longiores. Siliquæ tenues ex pilis adpressis undique (etiam in angulis) canescentes. Semina exangulata. Confer Gr. et God. Fl. Fr. i. 89.

Exemplaribus permultis hujus gregis accurate observatis species s. d. Europeæ videntur omnes sub *E. Cheiranthio*, Pers., velut subspecies seu varietates enumerandæ. Synonymia extricatu dificillima.

BRASSICA (*L. Gen.* 820; *B. et H. Gen. Pl.* i. 84).

[In genere a cel. Bentham et Hooker reformato cum *Brassicis* veris (Linnæano sensu) enumerantur sicut subgenera *Sinapodendron*, Lowe, *Sinapis*, L., *Erucastrum*, Schimp. et Spenn., et *Hirschfeldia*, Mœnch. His forsan melius addenda erit *Diplotaxis*, genus charactere nullo satis stabili fulcratum. Plurimæ species habitu proprio a *Brassicis* distinguuntur, sed *Diplotaxis virgata, D. siifolia, D. auriculata* nec habitu nec charactere a *Brassica* dignoscendæ, et nisi obstitisset auctoritas gravissima *Diplotaxin* cum cæteris generibus supra memoratis sub *Brassica* enumerare maluissem, duce cel. Boissier (Voy. Esp. ii. 32), etsi vir celeb. in Flora Orientali sententiam mutavit.]

B. TORULOSA (*Durieu in Rev. Bot.* ii. 434; *Expl. Bot. Alg.* i. 74; *Walp. Ann.* i. 48).

Mar. sept.—Tanger (*Salzm. Exsicc. sub* Diplotaxi catholica)! (*Webb Herb.*); Tetuan (*Webb Herb.*)!

Mar. occid.—Mazagan! Mogador (*Balansa, Coss. Index*).

Ar. Geog. Africa boreali-occidentalis; Hispania?

Nimis proxima *Diplotaxi siifoliæ*, Kze.; hanc ægre distinguo siliquæ rostro longiore tenuiore insigniter trinervi, nec ut in *D. siifolia* sæpius obsolete trinervi.

B. FRUTICULOSA (*Cyr. Pl. Var. Neap.* fasc. 2, p. 7, tab. 1; *DC. Pr.* i. 216).

Mar. occid.—Prope Mogador (legit Lowe, sed determinatio incerta)? Cel. Cosson spec. Loweanum cum *Sinapi radicata* (Desf. Fl. Atl. ii. 98, tab. 167) comparavit et in eadem sententia facile hæreo. *Sinapis hispida*, Desf. est enim, ut mihi fidem fecerunt specimina (Balansa, Pl. d'Alg. No. 50) ex Mostaganem, varietas hispida *Brassicæ fruticulosæ*, Cyr. Confer tamen Boiss. Fl. Or. i. 393, de *B. fruticulosa*.

B. VARIA (*Durieu in Rev. Bot.* ii. 434; *Walp. Ann.* i. 48), = Erucastrum varium (*Durieu, Expl. Bot. Alg.* tab. 75).

Mar. merid.—In saxosis aridis pr. Seksaoua! Milhain!

Ar. Geog. Marocco; Algeria occidentalis.

Inter spec. duo supra Seksaoua lecta unum refert potius var. *β. mon-*

tanam, Dur. *l. c.* Siliquæ pubescentes in spec. nostris sunt magis patentes quam in spec. e loco classico pr. Oran receptis.

BRASSICA ELATA (*Ball, in Journ. Bot.* 1873, 298). (Plate XII.)

Perennis; caulis erectus, simplex, 3–6-pedalis, superne glaberrimus subaphyllus; folia radicalia (10–14-pollicaria) et caulina inferiora lyrato-pinnatifida, lobo terminali-maximo, rhomboideo, inæqualiter crenato-dentato, lateralibus oppositis alternisve, ovato-cuneatis, dentatis, rachi lata cum nervis lateralibus albo-rubente, omnia hispido-incana; inflorescentia pyramidalis e ramis brevibus patulis subæqualibus; pedicelli breves, stricti; sepala erecta, obtusa, pilosiuscula; petala saturate lutea, limbo subrotundo; siliqua subtorulosa, superne nervosa, in rostrum conicum 1–2-ovulatum trinerve attenuata.

Mar. merid.—In regione inferiore Atlantis Majoris—in rupibus apricis prope Seksaouna! et Milhain! circ. 1000 m. Huc verisimiliter frustulum mancum in monte Djebel Afougueur ab indigena Ibrahim lectum et a cel. Cosson benevole communicatum!

Species insignis, ab affinibus omnino dissimilis. Proxima est *B. bæticæ*, Boiss., sed in hac rami laterales distantes erecti, nec velut in nostra planta versus apicem caulis approximati patuli, siliquæ rostrum biovulatum, pedicelli erecto-patentes. Ill. Boissier calycem *patentem B. bæticæ* tribuit, et sepala *obtusa*, dum in tabula (Boiss. Voy. en Esp. pl. 9) pictor sepalum *acutum* perperam delineavit. In speciminibus siccis mihi obviis sepala erecta nec patentia videntur. In eadem tabula siliquæ rostrum ovulis 2 abortivis ostenditur. Ubi ovulum unum alterumve fertile adest rostrum fit longius et siliquæ dimidiam longitudinem attingit. In specie nostra et in sequente siliqua quam in *B. bætica* multo minor.

B. RERAYENSIS (*Ball, Journ. Bot.* 1873, 298). (Plate XIII.)

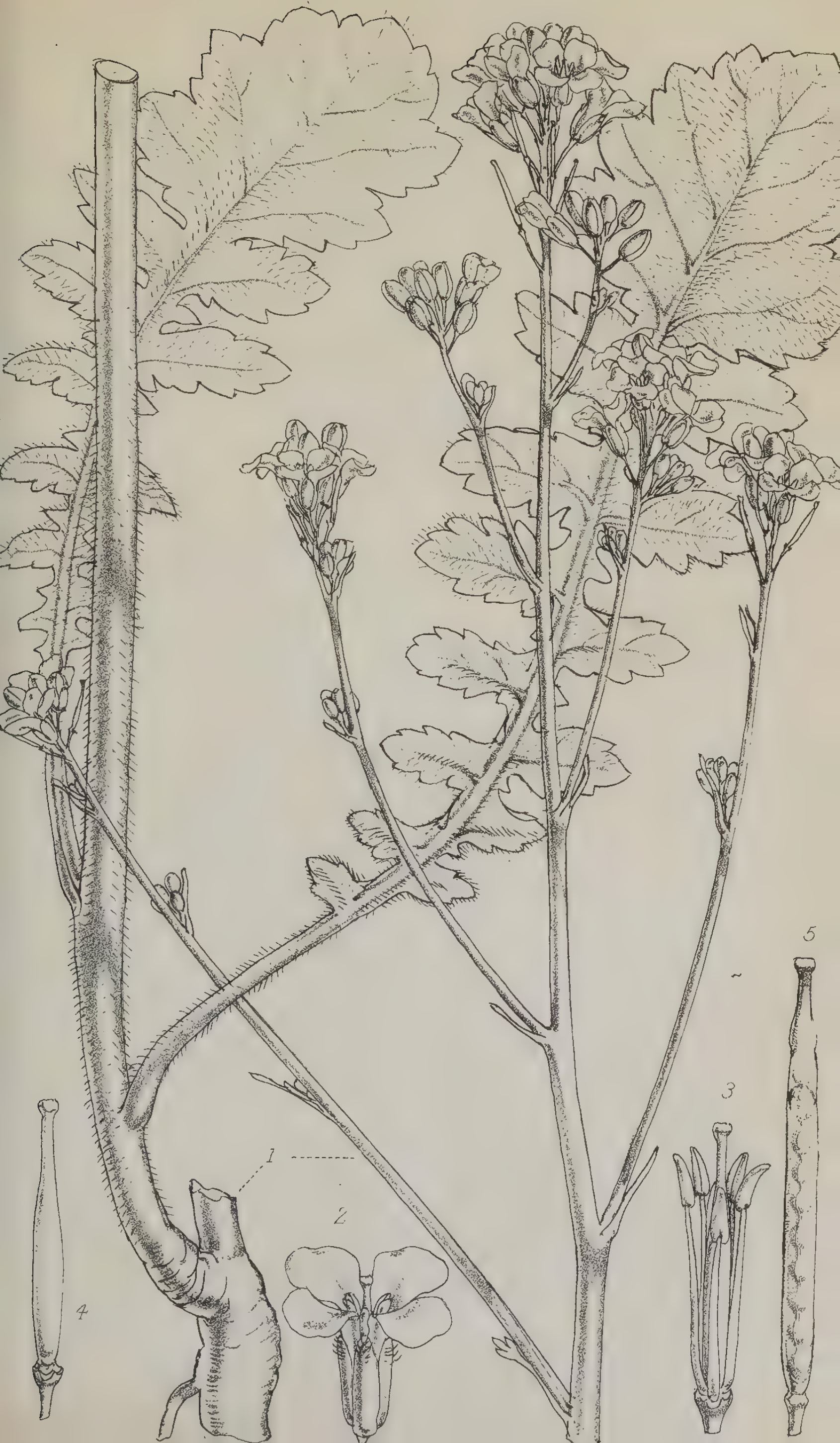
Radix perennis; caulis e basi adscendente erectus 1–2 furcatus, glaberrimus, subaphyllus; folia radicalia parva, incano-hirsuta, runcinato-lyrata, segmentis basin versus alternis, caulina pauca demum linearia; racemus brevis, pauciflorus; pedicelli erecto-patuli, tenues, siliquam $\frac{1}{2}$ æquantes; rostrum tenue, aspermum (?), siliquæ $\frac{1}{4}$ seu $\frac{1}{5}$ partem attingens; sepala elliptico-oblonga, pilosa; petala saturate lutea.

Mar. merid.—In regione subalpina Atlantis Majoris in convalle Aït Mesan, a 2000 m. ad 2500 m.

Fructus in speciminibus nostris omnino immaturus, melius exploratus forsan ovulum in rostro detectum fuerit. Quocunque fit a *Brassicis* planta nostra nullomodo divellenda. *B. bætica*, Boiss., proxime affinis, differt foliis glabris vel ex setis brevibus sparsis scabrida, racemo elongato, siliqua duplo longiore, rostro crasso dispermo, nec tenui aspermo.

B. NIGRA (*L. et DC. Pr.* i. 218, sub *Sinapi*; *Koch, Deutsch. Fl.* iv. 713; *Boiss. Fl. Or.* i. 390).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!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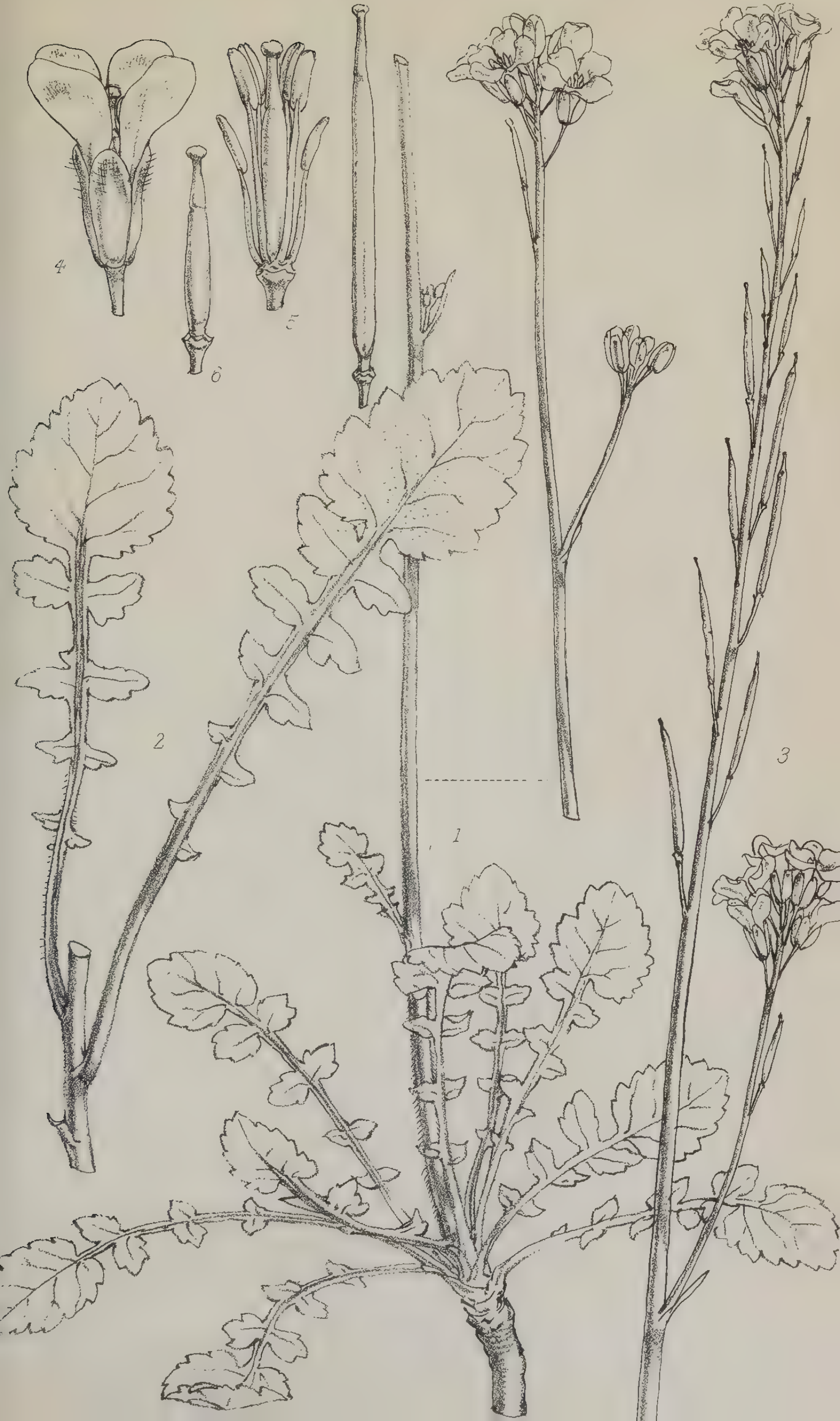
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Ar. Geog. Europa (exclusa arctica); regio tota Mediterranea.

Specimen immaturum et incertum a *J. D. H.* prope Tingidem lectum forsan huc spectat.

BRASSICA ARVENSIS (*L. et DC. Pr.* i. 219, sub *Sinapi*, = B. sinapis (*Vis. Fl. Dalm.* iii. 136).

Mar. sept.—Tanger (*Webb Herb.*)!

Mar. merid.—? Specimen mancum valde incertum legi pr. Sheshaoua! Spec. alterum pariter incertum pr. Ourika legerunt R. et Fr.!

Ar. Geog. Europa et Asia temperata; regio Mediterranea.

B. ALBA (*L. et DC. Pr.* i. 220, sub *Sinapi*; *Boiss. Voy. Esp.* ii. 39).

Mar. occid.—Mogador (*Lowe Cat.*).

Forsan est potius species sequens. *B. alba* hucusque in Imp. Maroccano non alibi visa sæpe cum seminibus cerealibus in terras longinquas aufertur.

Ar. Geog. Verisimiliter indigena in regione Mediterranea orientali, unde versus occidentem usque Insulas Canarienses, et per Europam mediam diffusa est.

B. HISPIDA (*Schsb. Gen. Marok.* p. 182, tab. 4, *et DC. Pr.* i. 220, sub *Sinapi*, non Tenore).

Mar. occid.—Verisimiliter ex agro Mogadorensi orta sunt semina a Schousboe culta.

Mar. merid.—In arvis pr. Seksaoua!

Ar. Geog. Algeria; Marocco; Macaronesia.

Tabula Schousbœana effigies plantæ cultæ ex seminibus Maroccanis—verisimiliter ex agro Mogadorensi. Planta spontanea gracilior est, et foliis multo minoribus prædita.

B. hispida, Tenore, est *Eruca sativa*, Lam.

B. ADPRESSA (*Moench, Meth.* 261, sub *Hirschfeldia*; *Bois. Voy. Esp.* ii. 38), = Sinapis incana (*L.*, *DC. Pr.* i. 220), = Erucastrum incanum (*Koch, Syn.* p. 56).

Mar. sept.—Tetuan (1851)!

Mar. merid.—Misra ben Kara haud procul Marocco! Keira (*Balansa*), *Coss. Index.*

Ar. Geog. Europa occidentalis; regio Mediterranea fere omnis (inclusa Macaronesia).

—— ——, var. LASIOCARPA, *nob.* = Sinapis heterophylla (*Lag. Cat. Hort. Matr.* 1816; *DC. Pr.* i. 220).

Mar. merid.—Mesfioua! In convalle Aït Mesan circ. 1300 m.!

Spec. nostra a typo longius recedunt quam spec. quæ ex Hispania vidi.

B. GENICULATA (*Desf. Fl. Atl.* ii. 98; *et DC. Pr.* i. 218, sub *Sinapi*).

Mar. merid.—Sheshaoua! In hortis et ruderatis urbis Marocco specimina immatura legimus!

Ar. Geog. Africa borealis.

Hæc species, cum *B. nigra* ab ill. A. P. De Candolle adsociata, meliore jure in § *Hirschfeldia* enumeratur. Habet rostrum 1–2-spermum et siliquam nullomodo tetragonam, gaudet enim hæc nervo medio parum prominulo nervis lateralibus evidentibus, quibus notis *B. adpressæ* potius quam *B. nigræ* propius accedit.

BRASSICA NERVOSA (*Ball, Journ. Bot.* 1873, 299).

Annua (?), ramosa; folia radicalia lyrata inciso-dentata, caulina pauca lanceolata, omnia in petiolo et nervis hirta; petala (pro grege) magna læte lutea; siliquæ brevis insigniter nervosæ pube brevi velutina vestitæ rostrum glabrum, aspermum (?).

Mar. merid.—Specimen unicum mancum legi in prov. Mtouga!

Forsan incaute nomen novum proposui (*loc. cit.*) pro planta male cognita, verisimiliter in § *Hirschfeldia* enumeranda. Ex structura siliquæ et cotyledonibus conduplicatis ad *Brassicas* certe referenda.

BRASSICA, spec. nov. ?

Mar. sept.—Cel. J. D. Hooker specimen legit, verisimiliter inter Tanger et Tetuan, cui desunt flores et folia inferiora. Proximum videtur *Sinapi Allionii*, Jacq., sed in spec. Hookeriano rostrum valvarum dimidio æquilongum, eximie trinerve, compressum, subanceps. Folium caulinum unicum quod adest omnino *Barbareæ vulgaris*, R. Br., unde nomen triviale *barbareæfolia* aptum fuerit.

BRASSICA, spec. nov.?

Mar. sept.—Alterum specimen ex regione collina inter Tanger et Tetuan attulit cel. Hooker, verisimiliter ad *Brassicam* referendum, sed ob fructum nimis immaturum incertum. Planta tota glabra, nisi foliis inferioribus setis nonnullis retrorsis præditis. Folia inferiora runcinato-pinnatifida. An forma singularis *B. nigræ* ?

BRASSICA, spec. nov.?

Mar. merid.—In convalle Amsmiz ad 1400 m. specimen unicum legi!

Annuum; caulis e basi ramosus, ramis subaphyllis 6–8-pollicaribus; folia radicalia et inferiora pauca obverse lanceolata in petiolum attenuata, repando-dentata, præsertim secus nervos strigulosa; racemus elongatus; pedicelli glabriusculi, stricti, calycem subæquantes; sepala æqualia, basi non saccata, purpurascentia; petala in unguem sensim attenuata, ochroleuca, venis saturate violaceis; siliquæ immaturæ subcylindricæ elongatæ erectæ, cum caule ex setis brevibus retrorsis scabræ; rostrum glabrum, tenue, valvarum sextæ parti æquilongum, verisimiliter aspermum. Stigma capitatum breviter bifidum. Habitu a *Brassicis* recedit; planta ulterius inquirenda.

DIPLOTAXIS (*DC. Syst.* ii. 220).

D. HARRA (*Forsk. Fl. Æg.-arab.* 118, sub *Sinapi*; *Boiss. Fl. Or.* i. 388), = D. pendula (*DC. Syst.* ii. 630, *et Prod.* i. 222), = D. hispida (*DC. l. c.*), = D. crassifolia (*DC. l. c.*), = Sisymbrium pendulum (*Desf. Fl. Atl.* tab. 156).

Mar. merid.—Prope Amsmiz circa 900 m.!

Ar. Geog. Hispania; Sicilia. Oriens. Africa borealis.

Siliquæ in spec. nostris sæpius non pendulæ.

D. ERUCOIDES (*L.*, sub *Sinapi*; *DC. Syst.* ii. 631, *et Prod.* i. 222).

Mar. sept.—Tanger!

Ar. Geog. Regio Mediterranea, sed non ubique; deest in Macaronesia, Græcia, Asia Minore et in Ægypto.

D. VIRGATA (*Cav. Præl.*; *DC. Syst.* ii. 631, *et Prod.* i. 222).

Mar. sept.—Prope Tanger!

Ar. Geog. Hispania. Africa borealis.

Specim. nostra Tingitana sistunt lusum vel varietatem seminibus subuniseriatis. Formam majorem foliis profundius divisis legi prope S. Roque!

D. CATHOLICA (*DC. Syst.* ii. 632, *et Prod.* i. 222; *L.* sub *Sisymbrio*).

Mar. sept.—Prope Tetuan legi anno 1851 specimina incompleta verisimiliter huc referenda!

Ar. Geog. Europa australis; Africa borealis.

D. SIIFOLIA (*Kunze in Flora*, xxix. 685; *Walp. Ann.* i. 49).

Mar. sept.—Frequens circa Tanger! In regione collina inter Tanger et Tetuan! In maritimis inter Tetuan et Ceuta!

Mar. occid.—Frustulum plantæ 4-pedalis haud procul Mogador legit J. D. Hooker verisimiliter huc referendum!?

Ar. Geog. In utroque litore freti Herculis, et (?) prope Mogador.

D. siifolia est *D. catholicæ* proxima species, sed forsan satis ditincta foliis et caule pilis patentibus vel subreflexis hispidulis, foliorum laciniis ovatis vel inciso-lobatis acutis, nec linearibus obtusis, petalis ochroleucis nec luteis. Ludit glabrescens sed foliorum indole semper diversa. Confer *Brassicam torulosam*, Dur.

D. TENUIFOLIA (*L.*, sub *Sisymbrio*; *DC. Syst.* ii. 632, *et Prod.* i. 222).

Mar. sept.—Tanger (*Salzm. Exsicc.* sub *D. catholica*)!

Ar. Geog. Europa media et Mediterranea. Tauria. Asia Minor.

D. TENUISILIQUA (*Del. Ind. Sem. H. Monsp.* 1847, 7; *Walp. Ann.* i. 49), = D. auriculata (*Durieu in Expl. Bot. Alg.* tab. 76, sine descr.).

Mar. occid.—Casa Blanca! Aïn el Hadjar, haud procul Mogador, *J. D. H.*!

Mar. merid.—Satis frequens in regione inferiore. In aridis fit tenuior, pumila parviflora. Prov. Shedma prope Aïn Oumast! prope Mskala! Misra Ben Kara! Amsmiz! Prov. Mtouga! et alibi visa.

Ar. Geog. Africa boreali-occidentalis.

Nomen triviale *tenuisiliqua* jure prioritatis conservatur.

Typo Algeriensi sat bene congruunt specimina nostra; paululum variant siliquis longioribus, caule interdum pilis retrorsis hispidulo.

—— ——, var. RUPESTRIS, *nob.*

A typo differt habitu graciliore, caule ramosissimo cum foliis hispidulo, seminibus sæpissime uniseriatis.

Mar. merid.—In rupibus aridis supra Seksaoua! Eandem formam legerunt in prov. Mtouga cl. *R. et Fr.*!

In hac specie pedicelli et siliquæ semper patentes vel erecto-patentes.

ERUCA (*DC. Syst.* ii. 636).

E. SATIVA (*Lam. Fl. Fr.* ii. 496; *DC. Pr.* i. 223), var. STENOCARPA, *Coss.*, = E. stenocarpa (*Boiss. et Reut. Pug.* 8).

Mar. merid.—Frequens in regione inferiore. Tasseremout! Ourika! Reraya! Milhain! Seksaoua usque 1500 m.! Sektana (*R. et Fr. spec. in herb. Kew.*)! Keira (*Balansa*); Akka (*Mard.*), *Coss. Index.*

Ar. Geog. Africa borealis. Forma typica per regionem Mediterraneam (inclusa Macaronesia) late diffusa et in cultis ac ruderatis Europæ mediæ cum seminibus advecta.

Varietas distinguitur habitu tenuiore, siliquis angustioribus subuniseriatis. Adsunt formæ intermediæ.

CARRICHTERA (*DC. Syst.* ii. 64).

C. VELLÆ (*DC. Syst., Ic. et Prod.* i. 224), = Vella annua, *L.*

Mar. merid.—Sat frequens in regione inferiore. Prov. Shedma (pluribus locis)! Sheshaoua! Misra Ben Kara!

Ar. Geog. Europa meridionalis calidior. Oriens. Africa borealis.

SUCCOWIA (*Med. in Ust. Ann.* i. 64).

S. BALEARICA (*DC. Syst.* ii. 642, *et Prod.* i. 224).

Mar. sept.—In monte Beni Hosmar spec. unicum detexit G. Maw et mihi benevole dedit!

Ar. Geog. Regio Mediterranea occidentalis a Sicilia usque Ins. Canarienses, nullibi a mare remota.

CAPSELLA (*Vent.* tabl. iii. 110).

C. BURSA-PASTORIS (*L.*, sub *Thlaspi*; *Moench. Meth.* p. 271; *DC. Prod.* i. 177).

Mar. sept.—Tanger!

Mar. merid.—In regione inferiore et subalpina et alpina Atlantis Majoris.

In convalle Aït Mesan supra Arround (2200 m.?), *R. et Fr. spec. in herb. Kew.*! In jugo Tagherot ultra 3000 m.!

Ar. Geog. Herba amphigæa in temperatis utriusque hemisphæræ et usque in regiones arcticas diffusa, hominum vestigia secuta.

SENEBIERA (*Poir. Dict.* vii. 75).

S. CORONOPUS (*L.*, sub *Cochlearia, Poir. Dict. l. c.*; *DC. Prod.* i. 203).

Mar. sept.—Tetuan!

Mar. merid.—Misra Ben Kara, haud procul urbe Marocco!

Ar. Geog. Europa media; regio Mediterranea (exclusa Macaronesia).

LEPIDIUM (*L. Gen.* 801).

L. SATIVUM (*L., DC. Prod.* i. 204).

Mar. merid.—In ruderatis urbis Marocco!

Ar. Geog. Regio natalis incerta. Per orbem late diffusum, sed sæpius ex hortis aufuga.

L. NEBRODENSE (*Rafin. Préc.* p. 38, sub *Nasturtio*; *Guss. Fl. Sic.* ii. 154; *Boiss. Fl. Or.* i. 355), = L. pubescens (*Tin. Cat. H. R. Panorm.* 150, *non Desv.*), = L. Bonannianum (*Guss. Prod. Fl. Sic.* p. 211), = Lepia Bonanniana (*Psl. Fl. Sic.* 84), var. ATLANTICUM, *nob.*

Folia radicalia spathulata longe petiolata, integra vel lyrata, caulina sessilia vix auriculata, omnia velutina; sepala glabra, purpurascentia; silicula glabra, matura interdum pubescens, breviter emarginata; stylus brevissimus.

Mar. merid.—In regione superiore Atlantis Majoris, vall. Aït Mesan! a 2500 m. ad 3000 m.

An diversum sit *L. stylatum* (Lag. Ann. Cienc. Nat. 1802) non satis liquet; confer Guss. Fl. Sic. *l. c.* Nomen infaustum, dum styli longitudo in hac grege nimis variabilis.

Ar. Geog. Formæ arcte affines per regionem Mediterraneam (exclusa Macaronesia) late diffusæ, nullibi frequentes.

Plurimæ s. d. species sicut varietates sive subspecies enumerandæ, scil. *L. calycotrichum*, Kze. = *L. granatense*, Coss. = *L. Dhayense*, Munby, quocum forsan jungendum est *L. microstylum* (Boiss. & Held. Diag. ser. 2, fasc. vi. p. 21, et Boiss. Fl. Or. i. p. 355). *L. nebrodensis* forma aberrans est (ni fallor) *L. petrophilum*, Coss. Valde affinis est species Europæ occidentalis *L. hirtum*, L., quocum adnumeranda sunt *L. heterophyllum*, Benth., *L. Smithii*, Hook., et *L. Villarsii*, G. et G., dum inter has formas characteres firmos adhuc frustra quærunt botanici. *L. oxyotum*, DC. Syst. = *L. humifusum*, Req., est species insulæ Corsicæ propria, erronee in DC. Prod. vol. i. p. 204, et Boiss. Fl. Or. i. 356, ad Floram Syriacam relata. Specimina enim in herb. Labillardière loci natalis indicatione carent, sed spec. Corsicis omnino conformia sunt. Hoc tamen, etsi siliculæ forma sat bene definitum, est sp. nostræ forsan nimis proxima; vidi inter specimina Sicula *L. nebrodensis* formam intermediam.

LEPIDIUM LATIFOLIUM (*L., DC. Pr.* i. 207).

Mar. sept.—Legi anno 1851 prope Tetuan ad ostium fluminis!

Ar. Geog. Europa temperata; regio Mediterranea (exclusa Macaronesia); Asia media. Verisimiliter stirps orientalis in regionibus occidentalibus advena.

BISCUTELLA (*L. Gen.* 808).

B. APULA (*L., DC. Pr.* i. 182).

Mar. sept.—In monte Djebel Kebir prope Tanger! Prope Tetuan in Monte Dj. Dersa (*Webb Herb.*)!

—— ——, var. MICROCARPA, = B. microcarpa (*DC. Pr. l. c.*).

Mar. occid.—Aïn el Hadjar, haud procul Mogador!

Mar. merid.—In regione inferiore Atlantis Majoris. Tasseremout! Ourika! Aït Mesan usque 1700 m.!

B. lyrata (*L., DC. Pr.* i. 182), = B. raphanifolia (*Poir.*), = B. maritima (*Ten. Prod. Fl. Neap.* 38).

Mar. sept.—Tanger in saxosis! In monte Beni Hosmar supra Tetuan, *J. D. H.*! Prope Tetuan ad rivos fluminis legi anno 1851!

Mar. merid.—In prov. Mtouga! In reg. subalpina Atlantis Majoris supra Arround ad 2200 m. legi specimen unicum siliculis minimis ad varietatem *B. scutulatam* (Boiss. et Reut. Diagn. Pl. Or. ser. 1, i. 41) accedens.

Nihil dubito quin *Biscutellæ* omnes annuæ regionis Mediterraneæ (exclusa *B. obovata*, sp. omnino dubia) pro unius speciei prole haberi debeant. Forma foliorum radicalium, qua nota *B. lyrata*, L., *B. raphanifolia*, Poir., et *B. maritima*, Ten., a cæteris dignoscuntur, subconstans, et hæ meo sensu subspeciem sistunt. Sed notæ diagnosticæ ex caule plus minusve folioso et ramoso, ex siliculis minoribus majoribusve, disco et margine puberulis, vel scabris, vel lævibus, vel disco lævi et margine scabro, omnino fallaces sunt, et inter exemplaria eodem loco nata plane variabiles. Habeo specimen prope Tanger lectum ad *B. bæticam* (Boiss. et Reut. Diagn. Pl. Or. ser. 1, i. 42) accedens. Specimina secus flumen pr. Tetuan lecta sunt proxima *B. maritimæ*, Ten. Sed in hac grege qui nolit speciem in catervam inordinatam divellere de nominibus auctorum parum curare debet.

THLASPI (*L. Gen.* 802).

T. PERFOLIATUM (*L., DC. Pr.* i. 176).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Mar. merid.—In regione media Atlantis Majoris, in convalle Aït Mesan circ. 2100 m.!

Ar. Geog. Europa media (in Scandinavia advena). Asia temperata. Regio Mediterranea.

—— ——, var. ROTUNDIFOLIUM, *nob.* = T. rotundifolium (*Tin. Pl. Rar. Sic.* fasc. i. 46),=T. Tineanum (*H. de Pav. Pl. Sic. Exsicc.*).

Mar. merid.—In regione alpina Atlantis Majoris. In jugo Tagherot usque 3200 m.! In monte Djebel Tezah!

Spec. nostra Siculis omnino conformia. Secundum auctores præcipuos siliculæ *T. perfoliati* sunt in quovis loculo 4-ovulatæ. In spec. nostris video sæpe semina 5 in quovis loculo fructus maturi.

Clar. Rein et Fritsch ex regione alpina versus jugum Tagherot retulerunt specimen mancum nimis incompletum, verisimiliter in genere *Thlaspi* ponendum.

IBERIS (*L. Gen.* 834).

I. PARVIFLORA (*Munby, in Bull. Soc. Bot. Fr.* ii. 282), ?=I. Numidica (*Jord. Diagn.* 290).

"Pedicellis fructiferis corymbosis; radice annua; caule a basi ramoso parce hirtulo; foliis glabrescentibus linearibus, valde dentatis quasi pectinatis; siliculis emarginatis, sinu latiusculo, stylo dimidium sinus æquante; petalis subæqualibus vix calycem violaceum superantibus."

Sec. diagnosin Munbyanum, *l. c.*

Mar. merid.—Specimina duo fructifera prope Tasseremout legit cl. G. Maw; quorum unum mihi communicavit!

Ar. Geog. Africa boreali-occidentalis.

Specimina nostra diagnosi supra citatæ haud omnino conformia, sed speciminibus Bourgæanis prope Gharrouban in prov. Oran lectis sat bene conveniunt. In spec. nostro racemus fructifer corymbosus, folia margine setosa, subpinnatifida lobis paucis 1–2 utrinque instructa; pedicelli fructiferi rigidi superne papilloso-scabri, inferne læves; stylus basi alæ siliculæ vix adnatus.

Pace cel. Cosson hæc mihi potius quam *I. pectinatæ*, Boiss., videtur *I. odoratæ*, L., proxima, et forsan ejus subspecies.

I. GIBRALTARICA (*L., DC. Pr.* i. 181).

Mar. sept.—In fissuris rupium montis Beni Hosmar prope Tetuan! eodem loco quo eam olim legit fructiferam beatus P. B. Webb.

Ar. Geog. In promontorio Calpes et in montibus Tetuanensibus.

HUTCHINSIA (*R. Br. in Hort. Kew.* iv. 82).

H. PETRÆA (*L.*, sub *Lepidio*; *R. Br. l. c.*; *DC. Pr.* i. 178).

Mar. sept.—Inter Tetuan et Ceuta! In monte Beni Hosmar prope Tetuan!

Mar. merid.—In regione subalpina Atlantis Majoris. Aït Mesan supra Arround circ. 2300 m.! In monte Djebel Tezah ad 2500 m.!

Ar. Geog. Europa (exclusa arctica). Montes regionis Mediterraneæ (exclusa Macaronesia).

ISATIS (*L. Gen.* 824).

I. TINCTORIA (*L.*, *DC. Pr.* i. 211), var. LÆTEVIRENS, *nob.*

Differt a planta Europæa satis variabili foliis læte virentibus, sed non video notas graviores differentiales. Siliculæ obverse lanceolatæ, sæpius apice obtusangulo.

Mar. merid.—Frequens in regione media Atlantis Majoris unde secus torrentes in reg. inferiorem descendit. In convalle Aït Mesan a 1600 m. usque 2000 m.! In convalle Amsmiz 1100–1700 m.! Specimina nostris conformia sub "*I. virens,* Coss. MSS." in montibus Djebel Ouensa et Djebel Afougueur ab indigeno Ibrahim lecta benevole comm. cel. Cosson.

Ar. Geog. Species per Europam mediam et australem, et per Orientem diffusa. Varietas Maroccana est.

CRAMBE (*L. Gen.* 825).

C. HISPANICA (*L.*, *DC. Pr.* 226),=C. reniformis (*Desf. Fl. Atl.* ii. 78, tab. 151; *DC. Pr. l. c.*),=C. filiformis (*Boiss. Voy.*, *an Jacq.* ?).

Mar. merid.—In regione media Atlantis Majoris. In convalle Amsmiz a 1500 usque 1800 m.!

Ar. Geog. Peninsula Iberica. Africa borealis.

C. hispanicam, L., et *C. reniformem*, Dsf., sistere unam eandemque speciem mihi haud dubium videtur. Nec in descript. auctorum, nec in exemplaribus plurimis Hispanicis et Algeriensibus a me sedule investigatis, nec in aspectu et habitu plantæ spontaneæ, quam pluries vivam observavi, notam differentialem nisi levissimam detexi. Quid sit vera *Crambe filiformis*, Jacq., hic non dijudicare licet. Nomen triviale Linnæanum certe conservandum.

RAPISTRUM (*Desv. Journ. Bot.* iii. 160).

R. RUGOSUM (*L.*, sub *Myagro*; *Berg. Phyt.* iii. 171; *DC. Pr.* i. 227).

Mar. sept.—Tanger! (*Webb Herb.*)!

Ar. Geog. Europa media; regio Mediterranea omnis. Ludit siliculis hirtis vel glabris.

CERATOCNEMUM (*Coss. et Bal. in Bull. Soc. Bot. Fr.* xx. 239).

"Sepala erecto-patula, lateralia haud saccata. Petala longe unguiculata, limbo integro. Stamina tetradynama, filamentis liberis subfiliformibus inferne complanatis edentulis. Glandulæ hypogynæ quatuor, duæ ad staminum longiorum paria, duæ ad stamina lateralia. *Siliqua* abbreviata, *indehiscens*, coriaceo-indurata mesocarpio suberoso, *biarticulata; articulo inferiore* pedicello vix latiore, tereti-subcompresso, *uniloculari, monospermo, valvis distinctis* sed *cohærentibus in appendicem terminalem triangulari-lanceolatam articulo superiori æquilongam* et in anfractu dorsali articuli superioris receptam *productis*; *articulo superiore* vix secedente, *subrhombeo* apice truncato stylo cuspidato, a latere *compresso*, nervo præminente suturam valvarum articuli inferioris continuante donato, utrinque dorso ad receptionem processus valvaris excavato, *uniloculari, monospermo*, evalvi. Stylus siliqua longior, lanceolato-linearis, tetragonus. Stigma depressum, integrum. Semina oblonga, funiculo brevissimo, *semen articuli inferioris pendulum, superioris erectum. Cotyledones* rectæ, obovato-suborbiculatæ, retusæ, *canaliculato-complicatæ*, radiculam amplexantes.

"Planta annua, erecta, ramosa, pilis simplicibus hirta. Folia oblonga, grosse sinuata dentatave, superiora angustiora sæpe subintegra. Racemi ebracteati, virgati, demum elongati, pedicellis filiformibus demum subclavato-incrassatis. Flores lutei. Siliquæ parvulæ, erecto-adpressæ.

"*Ceratocnemum*, novum genus ex ordine Cruciferarum, juxta *Rapistrum* collocandum, sed distinctum valvis articuli inferioris siliquæ in appendicem articulo superiori æquilongam productis, non abrupte truncatis, articulo superiore subrhombeo compresso utrinque uninervio, non ovoideo vel subgloboso pluricostato.—Nomen generis ob formam insignem articuli inferioris siliquæ e verbis græcis *κέρας* (*cornu*) et *κνημίς* (*ocrea*) conflatum."

CERATOCNEMUM RAPISTROIDES (*Coss. et Bal. l. c.*).

"Planta annua. Caulis erectus, a parte inferiore vel a basi ramosus, teres, pilis albis rigidulis deflexis hirtus. Folia hinc inde præsertim in nervis et ad margines hirta, oblonga, in petiolum brevem angustata, grosse sinuato-subpinnatifida dentatave, superiora angustiora dentata vel subintegra. Racemi ebracteati, primum subconferti, demum elongati virgati laxiusculi. Pedicelli calyce subbreviores, suberecti, demum incrassato-subclavati, hirti. Sepala hirta. Petala lutea, calyce subtriplo longiora, limbo obovato integro venis saturatioribus picto, in unguem exsertum attenuata. Stamina longiora calycem longe excedentia. Siliquæ pilis patentibus hirtæ, 8–10 millim. longæ, erectæ, adpressæ. Semina stramineo-fuscescentia, sub lente tenuissime punctulata. Maio 1867 floriferum et jam fructiferum lectum."

Diagnoses accuratas gen. et spec. nov. ad calcem conservare malui.

Mar. merid.—In monte Djebel Orguis supra Imintenout detexit cl. Balansa! Legimus 4–6-pedale ramosissimum in sepibus distr. Mesfioua haud procul urbem Marocco! et nanum (vix pedale) prope Tasseremout!

CAKILE (*Adans. Fam. Pl.* ii. 423).

C. MARITIMA (*Scop. Fl. Carn.* No. 844; *DC. Pr.* i. 185),=Bunias Cakile, *L.*

Mar. sept.—Tanger in arenosis! In arenosis inter Tetuan et Ceuta!

Ar. Geog. Litora maritima totius Europæ et Africæ borealis, in Macaronesia et Africæ litore Atlantico nondum detecta.

Forma arcte affinis in America boreali et in Antillis.

HEMICRAMBE (*Webb, in Ann. Sc. Nat.* ser. 3, xvi. 246, tab. 19).

H. FRUTICULOSA (*Webb, l. c.*; *Walp. Ann.* iv. 215).

Descriptionem Webbianum hic referre licet.

"Suffruticulus glaberrimus caudicibus lignosis, tortuosis, nodosis, nudis ad ramorum apicem foliosis. Folia petiolata, læte viridia, lyrata, basi sæpe auriculata, lobis 2 inferioribus oppositis, 7-nervata, nervis a medio ad lobos divergentibus, venis reticulatis sub epidermide insignita, basi subcordata truncata vel cuneata, lamina 2–2½ poll. longa, 1½–2 poll. lata. Petioli 2–3 poll. longi, ascendentes, basi latiores, subsemivaginantes, supra canaliculati, juniores glandulis nigris inconspicuis conspersi. Ramuli floriferi foliis subduplo longiores. Racemi laxe paniculati. Pedicelli filiformes, floribus duplo longiores, fructiferi elongati, ebracteati. Calyx basi fere æqualis, luteus, patens, mox deciduus, foliolis lanceolatis, concavis, intus nervosis, tenuibus, diaphanis. Petala lutea, calyce duplo longiora, longe unguiculata, unguiculis angustis, laminis obovato-lanceolatis, basi attenuatis, apice rotundatis, integris, ramoso-nervosis. Filamenta edentula, sub medio dilatata, apice subulata. Antheræ æquales lanceolatæ, sub medio affixæ, basi sagittatæ, flavæ. Glandulæ hypogynæ 4, quarum 2 post stamina longiora sitæ iisque alternantes, calcariformes, obtusæ, 2 ante stamina breviora iisque oppositæ, tenues laminiformes ovario applicatæ. Ovarium ellipticum, planum, basi attenuatum, trinerve, margine acutum, ad medium usque alatum. Stylus nullus. Stigma sessile globosum, centro depressum. Siliquæ ellipsoideæ utrinque attenuatæ, apice rostratæ, glabræ. Funiculi recurvi, usque ad medium dissepimento rudimentario immersi. Ovula globoso-pyriformia, sub apice affixa. Semina ovata, compressa, reticulata, fusca. Cotyledones rotundatæ, tenues. Radicula cylindracea cotyledonibus longior."

Mar. sept.—In fissuris rupium calcarearum montis Beni Hosmar supra Tetuan primus detexit beatus P. B. Webb. Eodem fere loco ad 900 m. s. m. legimus vix florentem die 12 Aprilis 1871!

Ovarium (utrinque) trinerve sec descript. Webbianum. In flore innupto video nervos duos laterales conspicuos, medium vero subobsoletum.

Planta singularis inter *Brassiceas* et *Cakilineas* transitum præbens, septo rudimentario, siliquæ articulo inferiore interdum aspermo vel prorsus abortivo. Habitus *Brassicæ*. Caudex basi diametro tripollicaris et ultra.

RAPHANUS (*L. Gen.* 812).

R. RAPHANISTRUM (*L., DC. Pr.* i. 229).
Mar. sept.—Tanger! (*Webb Herb.*)! In regione collina inter Tanger et Tetuan!
Mar. occid.—Casa Blanca!
Ar. Geog. Europa omnis; regio Mediterranea (inclusa Macaronesia).

CAPPARIDEÆ (*Juss. Gen.* p. 242).

CAPPARIS (*L. Gen.* 643).

C. SPINOSA (*L., DC. Pr.* i. 245), var. β, CANESCENS (*Coss. Not. Pl. Crit.* i. 38), = C. herbacea (*Willd. Enum. Ber.* 560; *DC. Pr.* i. 245).
Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan a 1300 ad 1600 m.!

—— ——, var. γ, ÆGYPTIA (*Boiss. Fl. Or.* i. 420), = C. Ægyptia (*Lam. Dict.* i. 605; *DC. Pr.* i. 245).
Mar. merid.—Sat frequens in apricis saxosis ad radices Atlantis Majoris. Gurguri! Seksaoua! Inter Sektana et Frouga (*G. Maw spec.*)! et alibi pluries visa!
Optimo consilio cel. Boissier loc. cit. species plurimas auctorum notis diagnosticis stabilibus non definitas sub typo Linnæano sicut varietates enumeravit.
Ar. Geog. Species per regionem omnem Mediterraneam late diffusa est, sed deest in Macaronesia.

RESEDACEÆ (*DC. Theor. Elem.* p. 214).

RESEDA (*L. Gen.* 608).

R. ALBA (*L., Müll. Arg. in DC. Pr.* xvi. sect. 2, 557).
Mar. sept.—Tetuan!
Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe*)!
Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia). Occurrit in Europa media, præsertim occidentali, forsan non indigena. Verisimiliter introducta in Indiæ orientalis montibus Nilgherry, et in Capite Bonæ Spei.

R. PROPINQUA (*R. Br. Obs. Oudn. Denh. Clapp.* p. 22; *Müll. Arg. in DC. Prod.* xvi. sect. 2, 559), = R. eremophila (*Boiss. Diagn.* ser. 1, viii. 88).
Mar. occid.—Secus Oued Kseb prope Mogador!
Mar. merid.—Prov. Shedma prope Mskala! Prov. Mtouga!
Ar. Geog. Regio desertorum a Syria et Arabia Petræa per Ægyptum, et

in plaga Africæ Tripolitanæ et Tunetanæ, et in Marocco meridionali.

R. propinqua est species sat variabilis, in eodem specimine video flores tetrameros et pentameros; scil. sepalis et petalis 4 vel 5. Petala in spec. Maroccanis iconi Müllerianæ (Monog. tab. vi. fig. 90) haud omnino conformia, sed differentiæ parvi momenti. Sepala sæpius subinæqualia, superiora paullo longiora. Capsulæ glandulosæ, sæpissime octocostatæ, costis 4 vel rarius 3 placentis oppositis elevatis subalatis. Semina fere ut in *R. alba.*

R. tricuspis (Coss. in Bull. Soc. Bot. Fr. xx. 241) cujus specimen prope urbem Marocco lectum ex herb. Schousboe debeo humanitati cel. auct., differt a *R. propinqua* imprimis capsula trigona ore tridentato. Forsan pro subspecie habenda; video tamen capsulam in *R. propinqua* interdum, etsi rarius, tridentatam.

RESEDA ATTENUATA (*Ball, in Journ. Bot.* 1873, 299). (Plate XIV.)

Radix perennis; caules 2–3 exiles, 8–12-pollicares; folia inæqualiter pinnatifida, caulina abbreviata, 2–4-juga; spica gracillima, pauciflora; bracteæ lineares, pedicellos brevissimos sæpius superantes; sepala ovato-lanceolata, superiora 3 interdum coalita; petala brevissima calycem vix superantia, staminibus breviora, 2 superiora gaudent appendicula (pro grege) magna, papilloso-ciliolata, concava, et lamina appendiculam æquante, profunde trifida, lobis æqualibus, petala media superioribus subæqualia, petalum inferius in lacinias tres æquales uninervias ultra medium divisum; capsula dentibus quatuor brevibus erectis coronata, pube rara brevissima adspersa.

Mar. merid.—In regione alpina et subalpina Atlantis Majoris, Aït Mesan! et in jugo Tagherot! a 2100 m. ad 3000 m. Ex montibus Djebel Afougueur et Djebel Ouensa (*Coll. Indig. Ibrahim*) specimina benevole comm. cel. Cosson.

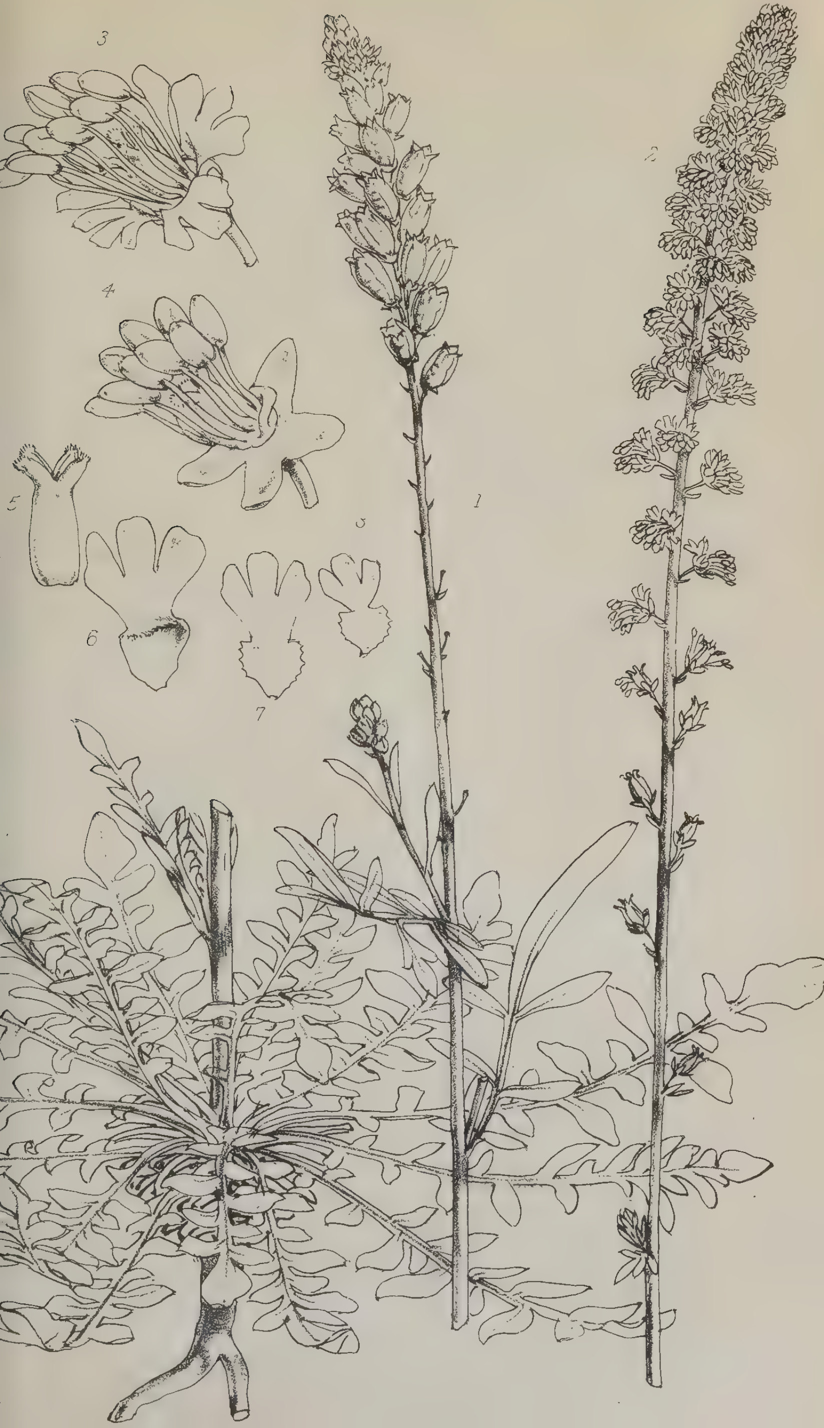
Proxima *R. Gayanæ* (Boiss. Voy. Esp. p. 76, tab. 21; Müll. Arg. Monog. p. 111). Differt præsertim petalis minimis, lamina fere ad basin trifida, omnibus appendiculatis, et capsulæ dentibus magis prominentibus. Forsan sicut subspecies enumeranda.

In DC. Prod. xvi. sect. 2, 558, cl. Müller, *R. Gayanam* sub nomine "*R. undata*, L." enumeravit. De *R. undata* inter auctores gravissimos magna est orta dissensio. Ipse Linnæus speciem male cognovit et quoad fructum descriptio (Spec. Pl. ed. 2, p. 644) plane erronea, et auctores fere omnes ad aliam speciem nomen retulerunt. Sententiam primam cl. auctoris Monographiæ secutus sum, et nomen *R. undata* delendum esse censeo.

R. PHYTEUMA (*L., Müll. Arg. in DC. Pr.* xvi. sect. 2, 563).

Mar. merid.—Prov. Shedma! In convalle Amsmiz circa 1200 m.!

Ar. Geog. Europa media. Regio Mediterranea imprimis occidentalis, sed deest in Macaronesia.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Reseda media (*Lag. Nov. Gen. et Spec.* p. 17; *Müll. Arg. in DC. Pr.* xvi. sect. 2, 563),=R. macrosperma (*Rchb. in Flora,* 1830, i. 130; *Walp. Repert.* ii. 752; *Müll. Arg. Monog.* 133).

Mar. sept.—In monte Djebel Kebir prope Tanger! et in saxosis prope Cap Spartel!

Ar. Geog. Peninsula Iberica. Forma arcte affinis (*R. orientalis,* Boiss.) in Oriente infrequens.

Specimina nostra Hispanicis conformia, sed folia fere omnia integra, capsulæ demum horizontales, nec pendulæ. Præter semina paululum majora petalorum lacinulæ spathulatæ, nec lineares, notam diagnosticam præbent. Adsunt tamen, sed rarius, formæ intermediæ, et hanc pro subspecie *R. Phyteumatis* enumerare malui.

R. diffusa (*Ball, Journ. Bot.* 1873, 299).

Radix biennis (?), caulis e basi ramosissima, diffusa; folia integra vel rarius trifida, oblongo-linearia, obtusa; bracteæ filiformes, (pro grege) longiusculæ; sepala ut in *R. media,* Lag.; petalorum superiorum lamina brevis, antheris vix longior, 3-partita, laciniis lateralibus profunde 3–5fidis, lacinulis apice abrupte spathulatis (fere cochleariformibus); capsula (nondum matura) insigniter 3-dentata, dentibus divergentibus.

Mar. merid.—In rupibus calcareis ab urbe Marocco septentrionem versus legit. cl. G. Maw, et mihi benevole communicavit.

A proxima *R. media,* Lag., recedit petalorum lamina multo minore, lacinulis cochleariformibus, nec obovato-oblongis apice rotundatis, capsulæ dentibus divergentibus, qua nota ad *R. inodoram,* Rchb., proprius accedit. *R. media,* Lag. et *R. inodora* ad subspecies, sub typo *R. Phyteumate,* L., reducendæ mihi videntur. Planta nostra longius a typo recedit.

R. LUTEA (*L., Müll. Arg. in DC. Pr.* xvi. sect. 2, 569), var. MUCRONULATA,=R. mucronulata (*Tin. Cat. H. Panorm.* 1828, p. 280).

Mar. merid.—Prov. Mtouga! Aïn Tarsil! Shedma!

Distinguitur caule stricto subsimplici elongato, capsulæ papillosæ, præsertim immaturæ, dentibus longioribus. Individua vegetiora ad typum revocantur.

Ar. Geog. Varietas nostra (ex Müll. Arg. *l. c.* 570) nascitur in peninsula Iberica et in Algeria et in insula Zante.

Species per Europam mediam et regionem Mediterraneam late diffusa est, sed in Africa boreali infrequens. Deest in Macaronesia, ubi locum tenet species affinis *R. crystallina,* Webb.

R. neglecta (*Müll. Arg. Monog.* p. 178, *et in DC. Pr.* xvi. sect. 2, 568).

Mar. merid.—In rupibus supra Seksaoua!? Frustulum ex Oasi Akka (*Coll. Indig. Mardochæus*) benevole comm. cel. Cosson.

Ar. Geog. Hucusque nonnisi in Algeria meridionali ad fines Saharæ detecta.

Frustula spec. ab Oasi Akka, quæ humanitati cel. Cosson debeo, speciminibus Kralikianis a Müll. Arg. citatis non omnino conformia. Specimen a nobis ad Seksaoua lectum, *R. luteæ* habitu simile, ex forma capsularum propius *R. neglectæ*. Hæc mihi certe forma *R. luteæ*, et forsan potius varietas quam subspecies, videtur. Forma petalorum inter varietates Müllerianas *R. luteæ* valde ludibunda. Quoad notam diagnosticam a magnitudine capsulæ desumptam confer verba ipsius auctoris. Sub *R. neglecta* habet "capsulæ 12 mm. longæ," dum sub *R. lutea* var. α legitur "capsulæ sæpius 12 mm. longæ." Denique semina in *R. neglecta* minora et magis numerosa, sed ni fallor adsunt individua intermedia.

RESEDA LANCEOLATA (*Lag. Gen. et Spec.* p. 17; *Müll. Arg. in DC. Pr.* xvi. sect. 2, 572), var. CONSTRICTA, *nob.*,=R. constricta (*Lange, Descr. Pl. Nov. præc. Hisp.* fasc. i. 6, tab. viii., *icon optima*).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan a 1200 m. usque 1600 m.! Supra Seksaoua circ. 1500 m.! Djebel Sidi Fars (*Balansa, Coss. Index*).

Ar. Geog. Hucusque nonnisi in Hispania australi visa.

R. constricta sistit varietatem satis insignem, pedicellis longis patulis subhorizontalibus, capsulis longius dentatis erectis. Folia in spec. ab Aït Mesan omnia trifida segmentis latis. Capsulæ dentes divergentes.

R. STRICTA (*Pers. Ench.* ii. 10; *Müll. Arg. in DC. Pr.* xvi. sect. 2, 373), var. SUBSESSILIS (?).

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Specimen unicum legi nondum fructiferum et ideo incertum; differt a spec. Hispanicis pedicellis brevissimis.

Ar. Geog. R. stricta est imprimis species Hispanica: varietates tres a Müller *l. c.* enumeratæ in Africa boreali sat late diffusæ.

R. ELATA (*Müll. Arg. in DC. Pr.* xvi. sect. 2, 578; *Coss. in Bull. Soc. Fr.* xx. 242).

Descriptionem Cossonianam optimam hic referre licet:—

"Planta biennis vel induratione perennans. Caules elati, indurato-frutescentes, ramosi, brevissime puberuli, ramis elongatis virgatis cortice olivaceo-viridi striis albidis. *Folia sub lente brevissime puberula*, in petiolum attenuata, plana, *indivisa lineari-lanceolata* elongata acutiuscula, *vel rarius trisecta* segmentis foliis indivisis conformibus. Racemi densiflori, bracteis apice subcomosi, demum elongati, capsulis inferioribus remotiusculis, superioribus approximatis. *Bracteæ* lanceolato-lineares longe acuminatæ, late albido-marginatæ, glabræ, *flores sub anthesi longe excedentes*, post anthesin cito deciduæ. Calyx 6-sepalus, *sepalis* oblongo-lanceolatis acutiusculis, late albo marginatis, glabris vel dorso brevissime puberulis, *cito deciduis. Petala* calyce subduplo longiora, omnium *ungue* albo *suborbiculato* villoso, *lamina pallide lutea, superiorum trisecta lobo medio lineari-spathulato lobis lateralibus* subduplo brevioribus *in lacinias inæquales lineares* 6–9-*sectis*, lateralium trisecta lobo medio oblongo inferne angustato lobis lateralibus indivisis, inferiorum lobo medio conformi lobis lateralibus sæpius obsoletis. Disci hypogyni lamina majuscula ovata acutiuscula ascendente marginibus recurvis extus concava, utrinque villosa. *Stamina circiter* 40, filamentis inæqualibus, glabris, sub anthera haud dilatatis, mox deciduis. Ovarium oblongo-cylindricum, papilloso-subvelutinum, apice profunde 3-dentatum dentibus glabris, placentis integris. Ovula inordinatim in placentis 3-serialia, in placenta quaque circiter 18–20. *Capsula* longiuscule pedicellata, suberecta, *longa, trigono-subcylindrica*, apice tridentata, *infra dentes vix angustata*, brevissime puberula, placentis integris. *Semina* minuta (immatura tantum nota), *tuberculis minutissimis undique obsita.*"

Mar. merid.—In montibus ad austro-occidentem urbis Maroc, prope Keïra, circiter ad 900 m. detexit cl. Balansa. Legimus in collibus aridis supra Imintenout ad 1100 m.! et in monte supra Seksaoua circ. 1500 m.!

A proxima *R. villosa*, Coss., differt, ut nobis docet cel. auctor, caule foliisque puberulis, non longe pubescenti-villosis, sepalis citius deciduis, petalorum superiorum lobis lateralibus haud cristæformibus, capsulis cylindraceo-trigonis, nec oblongis infra dentes vix angustatis.

In spec. nostris capsula infra dentes evidenter angustata, dentes divergentes multo longiores quam in *R. villosa*, indumentum totius plantæ brevissime hirtulo-scabrum.

RESEDA LUTEOLA (*L.*, *Müll. Arg. in DC. Pr.* xvi. sect. 2, 583).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! Formam latifoliam legimus inter Tetuan et Ceuta!

—— ——, var. AUSTRALIS (*Müll. Arg. l. c.*).

Mar. merid.—In monte supra Seksaoua circa 1400 m.!

—— ——, var. CRISPATA, = R. crispata (*Link, Enum. Pl. H. Ber.* 1822, p. 8).

Mar. sept.—In regione collina inter Tanger et Tetuan!

Species per Europam mediam et regionem totam Mediterraneam (inclusa Macaronesia) late diffusa est. De distributione varietatum ab auctoribus non rite definitis fusius disserere inutile duco.

CISTINEÆ (*Juss. Gen.* 249 ; *Spach, Ann. Sc. Nat.* ser. 2, vi. 357).

CISTUS (*L. Gen.* 673 ; *Willk. Ic. et Desc. Pl.* tab. 75 ad 109).

C. ALBIDUS (*L., DC. Pr.* i. 264 ; *Willk. l. c.* tab. 77).

Mar. sept.—In monte Beni Hosmar supra Tetuan ! In rupibus prope Tetuan (1851) !

Ar. Geog. Regio Mediterranea occidentalis. Deest in Macaronesia. Hic et sequens *C. crispus* desunt in Græcia. Conf. *Boiss. Fl. Or.* i. 437.

C. CRISPUS (*L., DC. Pr.* i. 264 ; *Willk. l. c.* tab. 78).

Mar. sept.—Prope Tanger in monte Djebel Kebir ! et alibi visus ! (*Salzm. Exsicc*) !

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

Ludit foliis breviter pubescentibus, vel (præsertim junioribus) longius villosis.

C. POLYMORPHUS (*Willk. l. c.* tab. 79–82),=C. vulgaris (*Spach, l. c.* pro parte). Forma genuina=C. villosus (*L., Sp. Pl.* 736 ? *et Lam. Dict.* ii. 12), cui ut synon. verisimiliter conjungendi sunt *C. pilosus*, L., et *C. incanus*, L., et *C. eriocephalus* (Viv. Cors. p. 8).

Mar. occid.—Djebel Hadid haud procul Mogador (*Rein et Fritsch, Spec. in hb. Kew.*) !

Mar. merid.—In collibus apricis sat frequens, et in regione inferiore Atlantis Majoris. Tasseremout ! Distr. Reraya ! In convalle Aït Mesan circ. 1300 m. ! In rupibus pr. Seksaoua !

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia) ; in peninsula Iberica minus frequens.

—— ——, var. CORSICUS (*Willk. l. c.* tab. 82).

Mar. merid.—Ad radices Atlantis Majoris prope Ourika legit G. Maw !

—— ——, var. CRETICUS (*Boiss. Fl. Or.* i. 437),=C. creticus (*L., DC. Pr.* i. 264).

Mar. occid.—In monte Djebel Hadid haud procul Mogador !

Ar. Geog. Regio Mediterranea præsertim orientalis. Hæc. var. deest, ut videtur, in peninsula Iberica.

Nomen Spachianum (*C. vulgaris*) antiquius foret, sed cl. auctor cum formis plurimis *C. polymorphi* etiam *C. albidum* et *C. crispum* in unam speciem comprehendit. Hæ novissimæ mihi videntur species probe distinctæ nec transitum unquam observavi. Nomen Willkommianum nobis ideo præferendum. Pace cel. Boissier *C. villosus*, L., est nomen nimis incertum, et ab ipso Linnæo pro parte minima catervæ formarum affinium sine nota diagnostica idonea propositum, et speciem collectivam indicare nequit.

Formam in Djebel Hadid lectam non sine dubio sub. var. *cretico*, Boiss., enumeravi. Habet folia minora magis rotundata, valde rugosa, et nisi in calyce desunt pili longiores.

CISTUS MONSPELIENSIS (*L.*, *DC. Pr.* i. 265).
Mar. sept.—Tanger (*Schsb. spec.*)! (*Webb Herb.*)! In regione collina inter Tanger et Tetuan! Inter Tetuan et Ceuta!
Mar. merid.—Ad radices Atlantis Majoris prope Tasseremout!
Ar. Geog. Regio Mediterranea præsertim occidentalis (inclusa Macaronesia). Nisi in Græcia et in insulis Cypro et Creta deest in Oriente.

C. SALVIÆFOLIUS (*L.*, *DC. Pr.* i. 265).
Mar. sept.—Sat frequens in ditione Tingitana. Prope Tanger! Prope Tetuan! "In fruticetis totius imperii" (*Schsb. in herb.*) Schousboe tamen nonnisi ditionem Tingitanam et provinc. meridionalium partem minimam cognovit.
Mar. occid.—Mogador (*Lowe Cat.*). Prope Aïn el Hadjar haud procul Mogador!
Ar. Geog. Regio Mediterranea tota (exclusa Macaronesia).

—— ——, var. β, MACROCALYX (*Willk. Ic. et Descr. Pl.* ii. 38. tab. 92).
Mar. occid.—In monte Djebel Hadid!
Mar. merid.—In regione inferiore Atlantis Majoris in convalle Aït Mesan usque 1200 m.!

C. POPULIFOLIUS (*L.*, *DC. Pr.* i. 266).
Mar. sept.—In monte Djebel Kebir prope Tanger! (*Salzm. Exsicc.*)! (*Schsb. spec.*)!
Ar. Geog. Peninsula Iberica, adjecta Gallia Narbonensi finitima, et ditione Tingitana.

C. LADANIFERUS (*L.*, *DC. Pr.* i. 266).
Mar. sept.—In monte Djebel Kebir prope Tanger! (*Salzm. Ezsicc.*)!
Var. vel lusus petalis immaculatis.
Ar. Geog. Peninsula Iberica, cum ditione Tingitana et Gallia Mediterranea finitima.

HELIANTHEMUM (*Pers. Syn.* ii. 75.)

H. LIBANOTIS (*L.*, sub *Cisto*; *Willd. Enum.* 570; *DC. Pr.* i. 267, *non* Cistus Libanotis, *Lam.*, *nec Dsf.*), = Halimium rosmarinifolium (*Spach, Ann. Sc. Nat.* ser. 2, vi.).
Mar. sept.—Prope Cap Spartel!
Ar. Geog. Peninsula Iberica et ditio Tingitana. Forsan etiam in Sicilia.
Olim inter auctores sententiæ diversæ de vero *C. Libanotide*, L.; hodie tamen omnibus notum est hoc esse cum stirpe Linnæana genuina identicum. Nomen triviale igitur nullomodo mutandum, et nomen *rosmarinifolium* (hodie pro sp. Americana Purshiana vindicatum)

verisimiliter ad *Cistum fastigiatum* (Guss. Pr. Fl. Sic. ii. 13) meliore jure spectat. An stirps Gussoniana a nostro *H. Libanotide* probe diversa sit mihi adhuc incertum est.

HELIANTHEMUM UMBELLATUM (*Mill. Dict.* No. 5; *DC. Pr.* i. 267), var. VERTICILLATUM, = Cistus verticillatus, *Brot.*

Mar. sept.—In collibus saxosis prope Tetuan!

Ar. Geog. Gallia media et meridionalis. Græcia. Peninsula Iberica. Marocco Tingitanus. Legi formam arcte affinem in Libano; conf. *Boiss. Fl. Or.* i. 439.

Specimina Gallica plurima quæ vidi inflorescentiam terminalem nec verticillatam ostendunt.

H. HALIMIFOLIUM (*L.*, sub *Cisto*; *Willd. Enum.* 569; *DC. Pr.* i. 268), = Halimium lepidotum (*Spach, l. c.*).

Mar. sept.—Tanger (*Webb Herb.*)! In saxosis prope Tetuan!

Mar. occid.—In parte superiore montis Djebel Hadid! In sylva *Callitris quadrivalvis* et alibi prope Mogador, et inde versus Aïn el Hadjar!

Ar. Geog. Europa Mediterranea occidentalis, ex Italia usque Lusitaniam. Africa borealis. Deest in Macaronesia.

—— ——, var. SEPALIS STELLATO-TOMENTOSIS, = H. multiflorum (*Salzm. Exsicc.*; *Willk. Ic. et Descr.* ii. 67, tab. 108).

Mar. sept.—Ex fruticetis et aridis regionis Tingitanæ (*Schsb. spec.*) benevole comm. cel. Cosson. (*Salzm. Exsicc.*!) In monte Djebel Kebir! (*Webb Herb.*)!

—— ——, var. LASIO-CALYCINUM, = H. lasio-calycinum (*Boiss. et Reut., Diagn. Pl. Or.* ser. 2, i. 50), = H. hirsutissimum (*Willk. l. c.* tab. 106).

Mar. sept.—In monte Djebel Kebir prope Tanger! (*Boiss. et Reut. l. c.*).

H. multiflorum et *H. lasiocalycinum* certo certius ad varietates *H. halimifolii* reducenda, notis nullis stabilibus distinguendas. *H. multiflorum* sæpe, sed non semper, foliis minoribus præditum, gaudet sepalis ex pilis longiuscule stellatim ramosis dense obtectis. Folia in hoc uninervia, in *H. halimifolio* obsolete trinervia dicuntur, sed discrimen omnino fallax et minime constans. In hac specie, ut fit in *Cistis* plurimis, indumentum variabile. In *H. lasiocalycino* folia et sepala pilis longis subvillosis plus minusve vestita, et indumentum stellatum fit rarius. Specimina nostra fere intermedia sunt sed propiora *H. lasiocalycino*. Nomen hujus formæ, vix pro varietate enumerandæ, cl. Willk. perperam mutavit.

H. TUBERARIA (*L.*, sub *Cisto*; *Mill. Dict.* No. 10; *DC. Pr.* i. 270).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! Djebel Kebir prope Tanger! Cap Spartel! Prope Tetuan!

Ar. Geog. Per regionem Mediterraneam occidentalem ex Dalmatia usque Macaronesiam diffusum. In Græcia verisimiliter errore indicatum ex Boiss. Fl. Or. i. 440.

HELIANTHEMUM GUTTATUM (*L.*, sub *Cisto*; *Mill. Dict.* No. 18; *DC. Pr.* i. 270).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Djebel Kebir prope Tanger! Cap. Spartel!

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea a Syria usque Macaronesiam. Gallia occidentalis. Forma arcte affinis in Anglia.

—— ——, var. MACROSEPALUM (*Coss. Pl. Crit.* 29),=H. macrosepalum (*Salzm. Exsicc.*),=Tuberaria macrosepala (*Willk.*, *l. c.* tab. 117).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! Spec. ex herb. Schousboe (sub *Cisto glanduloso*, Schsb.) "in fruticetis pr. Tanger," lectum benevole comm. cel. Cosson. Djebel Kebir! (*Reut.*). Tetuan (1851)!

Legi etiam prope San Roque haud procul Gibraltar!

—— ——, var. INCONSPICUUM,=H. inconspicuum (*Thib. in Pers. Syn.* ii. 77; *DC. Pr.* i. 271).

Mar. sept.—Prope Tanger legit *J. D. H.* spec. Hispanicis omnino conforme!

Ar. Geog. Tam hæc quam var. *macrosepalum* in peninsula Iberica et in ditione Tingitana obviæ sunt.

Hæc est inter typum et formam pro specie nova in Boiss. et Reut. Pug. p. 13, propositam, sub nom. *H. brevipes*, varietas intermedia. Characteres in hoc grege ex præsentia vel defectu stipularum, ex pilis longis plus minusve frequentibus, ex longitudine pedicellorum et magnitudine petalorum et sepalorum valde ludibundi et ideo fallaces.

H. NILOTICUM (*L.*, sub *Cisto*; *Pers. Syn.* ii. 78; *DC. Pr.* i. 272).

Mar. sept.—Tanger (*Webb Herb.*)! Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca! Prov. Haha prope Mogador!

Mar. merid.—Prov. Shedma! Mesfioua! Tasseremout! Milhain!

Ar. Geog. Regio Mediterranea tota (inclusa Macaronesia).

—— ——, var. MICROCARPUM (*Coss. in Bourg. Pl. Hisp.*; *Boiss. Fl. Or.* i. 441).

Mar. merid.—In saxosis aridis regionis inferioris. Prov. Shedma prope Aïn Oumast! Mskala! et alibi.

Ar. Geog. Varietas per reg. omnem Mediterraneam diffusa.

—— ——, var.? PUMILUM.

Mar. merid.—In reg. subalpina Atlantis Majoris supra Arround legi exemplaria duo 2–3-pollicaria deflorata, foliis superioribus et sepalis tomentoso-hirtis, racemo contracto, capsula fere typica sed multo minore, seminibus angularibus omnino lævibus. Verisimiliter est hujus speciei polymorphæ forma nana.

Utrum *Cistus ledifolius*, L., Sp. 742, foret synonymon *C. nilotici*, sive melius ad var. *microcarpum* referri debet non satis eminet. Nomen specificum ab auctoribus posterioribus confusum hodie negligendum.

Helianthemum papillare (*Boiss. Voy. Esp.* ii. 63, tab. 14).

Mar. merid.—In saxosis aridis supra Seksaoua!

Ar. Geog. Peninsula Iberica; Africa boreali-occidentalis.

H. ÆGYPTIACUM (*L.*, sub *Cisto*; *Mill. Dict.* No. 23; *DC. Pr.* i. 273).

Mar. occid.—Legi prope Casa Blanca specimen exsiccatum sed satis certum!

Ar. Geog. Per regionem Mediterraneam calidiorem (exclusa Macaronesia) diffusa. Deest in Græcia, Dalmatia et in Gallia Mediterranea.

H. LIPPII (*L.*, sub *Cisto*; *Pers.* ii. 78; *DC. Pr.* i. 273). Var *a* (*Boiss. Fl. Or.* i. 443), = Cistus ellipticus (*Desf. Fl. Atl.* i. 418, tab. 107), = H. rosmarinifolium, *Psl. Symb.* tab. 21.

Mar. occid.—In monte Djebel Hadid specimen unicum legi! Ex spec. in Oasi Akka lecto (*Coll. Indig. Mardochæus*) frustulum benevole comm. Cosson.

In herb. Kew. conservatur specimen a cll. Rein et Fritsch in Marocco (verisimiliter in ditione Mogadorensi) lectum; a nostro parum differt floribus et capsulis aliquid majoribus et sepalis longius villosis.

Ar. Geog. Oriens. Africa borealis. Sicilia.

H. CANARIENSE (*Jacq. Ic. Rar.* i. tab. 97, sub *Cisto*; *Pers. Syn.* ii. 78, *DC. Pr.* i. 274).

Mar. occid.—Legimus prope Mogador! et Aïn el Hadjar! et in monte Djebel Hadid! et iterum legi in litore Atlantico ab urbi Saffi meridiem versus!

Ar. Geog. Species propria insularum Canariensium et terræ continentalis proximæ.

Nisi herba densius incana spec. nostra Canariensibus omnino conformia.

H. RUBELLUM (*Psl. Del. Prag.* 25; *Boiss. Voy. Esp.*), = H. rotundifolium (*Dun. in DC. Pr.* i. 277), = Cistus nummularius (*Cav. Ic.* tab. 142; *Dsf. Fl. Atl.* i. 423, *non L.*).

Mar. merid.— In regione media Atlantis Majoris. In convalle Amsmiz 1200–1600 m.!

Ar. Geog. Hispania; Africa boreali-occidentalis; Sicilia, et forma arcte affinis (*H. Hymettium*, Boiss. et Heldr.) in Græcia.

Specimina nostra gaudent foliis oblongo-ellipticis acutiusculis, et sistunt transitum in *H. Hymettium*, quod nobis mera varietas videtur.

H. LAVANDULÆFOLIUM (*Lam. Dict.* ii. 25, sub *Cisto*; *DC. Fl. Fr.* iv. 820, *et Prod.* i. 278).

Mar. occid.—Ab urbe Mogador septentrionem versus! In monte Djebel Hadid! Inter Mogador et Shedma (*G. Maw spec.*)! Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Peninsula Iberica. Gallia Mediterranea et Corsica. Oriens. Africa boreali-occidentalis. Deest in Italia, Dalmatia, Africa boreali-orientali et in Macaronesia. Fere semper in regione litorali occurrit.

H. Broussonnetii, species Canariensis ex scheda in herb. Bouchet prope Mogador indicata, verisimiliter ad floram Maroccanam non pertinet. Broussonnet plantas patriæ diversæ in herbario sæpe miscuit, et hæc pulchra stirps in agro Mogadorensi nemini recentiorum obvia fuit.

HELIANTHEMUM GLAUCUM (*Cav. Ic.* iii. 31, tab. 261, *non Desf.*, sub *Cisto*; *Pers. Syn.* ii. 78; *DC. Pr.* i. 279).

Mar. merid.—In convalle Amsmiz circa 1400 m.!

Specimina nostra Hispanicis omnino conformia nisi statura minore. Ludit petalis albis ut fit in spec. Bourgæanis, No. 1074, Pl. d'Espagne.

—— ——, var. STŒCHADIFOLIUM, = H. stœchadifolium (*Brot. Fl. Lus.* ii. 270, sub *Cisto*; *DC. Pr.* i. 279).

Mar. merid.—In rupibus supra Seksaoua!

Distinguitur foliis superioribus insigniter revolutis et ramis abortivis in axillis foliorum ad fasciculos foliorum juniorum reductis, unde affinitas aliqua, ut jam innotuit Brotero *l. c.*, cum *H. lavandulæfolio*.

Specimina Maroccanis simillima legi olim prope Malaga. Petala vidi semper lutea.

Ar. Geog. H. glaucum, per regionem Mediterraneam occidentalem late diffusum, in Macaronesia deest. Est stirps valde ludibunda, cujus limites ægre definiendi.

H. VIRGATUM (*Desf. Fl. Atl.* i. 432, sub *Cisto*; *Pers. Syn.* ii. 79; *DC. Pr.* i. 282. Inclusis *H. racemosum* (Lam. Dict. ii. 25, sub *Cisto*; Dun. in DC. Pr. i. 281), et *H. pilosum* (Pers. Syn. ii. 79; DC. Pr. i. 282, an L., sub *Cisto*).

Mar. merid.—Frequens ad radices Atlantis Majoris et in convallibus calidioribus. Tasseremout! Ourika! Reraya! Aït Mesan usque 1400 m.! Sektana! Amsmiz! Milhain! Ex Prov. Mtuga (*R. et Fr. spec. in herb. Kew.*)!

Notæ diagnosticæ quibus *H. racemosum* et *H. pilosum* ab *H. virgato* separantur sunt adeo instabiles et ludibundæ ut ne quidem varietates sistunt. Si verbis auctorum hæremus calyx in *H. virgato* cano-pulverulentus pubescens, in *H. piloso* nervoso-striatus pilosiusculus, in *H. racemoso* nervoso-sulcatus violaceo-rufescens. In ditione nostra calyces sæpius subglaberrimi, rarius tenuiter incano-pubescentes, vel pilosiusculi, folia angusta, plus minusve margine revoluta, in pagina superiore viridia vel subincana, subtus stellato-tomentosa. In speciminibus Hispanicis et Algeriensibus *H. pilosi* video calyces valde variabiles ut in spec. nostris. Petala ludunt alba vel pallide rosea.

—— ——, var. STRICTUM, = H. strictum (*Cav. Ic.* iii. 32, tab. 263, sub *Cisto*; *Pers. Syn.* ii. 79; *DC. Pr.* i. 281), = H. virgatum, var. Maroccanum, *nob. MSS.*

Mar. merid.—Valde frequens in saxosis aridis regionis inferioris et rarius in convallibus Atlantis Majoris. Legimus in Prov. Shedma prope Aïn Oumast! in glareosis torrentis Ourika! prope Seksaoua! et in convalle Aït Mesan! In convalle Amsmiz legi varietatem seu lusum calyce piloso, sepalis exterioribus longioribus et acutioribus, stipulis pariter longioribus foliorum dimidiam longitudinem subæquantibus. Petala ex albo pallide rosea.

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

Affinitas inter *H. virgatum* et *H. apenninum* (quocum velut synonyma enumeranda sunt *H. pulverulentum*, DC., *H. polifolium*, DC., et plurimæ species ab auctoribus enumeratæ) tam arcta est ut vix pro typis specificis probe distinctis haberentur.

FUMANA (*Spach, Ann. Sc. Nat.* ser. 2, vi. 359).

Genus *Fumana* staminibus exterioribus sterilibus moniliformibus, seminibus anatropis raphe præditis, facile recognoscendum, et præterea habitu proprio (in *F. glutinoso* minus eminente) gaudens, a celebb. Benth. et H. f. in Gen. Pl. 114, ad subgenus *Helianthemi* reductum est. Pace tantorum virorum vestigia auctorum recentiorum qui hoc (eodem jurequo *Callianthemum* et plurima genera subnaturalia) nomine proprio salutarunt secuti sumus.

F. GLUTINOSA (*L.*, sub *Cisto*; *Pers. Syn.* ii. 79, *et DC. Pr.* i. 276, sub *Helianthemo*; *Boiss. Fl. Or.* i. 449), = F. viscida (*Spach, loc. cit.*).

Mar. sept.—Tanger (*Schsb. spec. sub* C. Fumana)! (*Webb Herb.*)! In rupibus prope Tetuan 1851, et iterum 1871!

Mar. occid.—Mogador (*Lowe*)! Ain el Hadjar! Djebel Hadid!

Mar. merid.—Sat frequens ad radices Atlantis Majoris et in convallibus calidioribus. Mesfioua! Ourika! Aït Mesan usque 1400 m.! Seksaoua! Amsmiz!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

—— ——, var. VIRIDIS, = Helianthemum viride (*Ten. Pr. Fl. Neap.* p. 31).

Mar. sept.—In rupibus prope Cap. Spartel! Inter Tanger et Tetuan! In monte Beni Hosmar supra Tetuan!

Optimo consilio cl. Spach plurimas s. d. species nullis notis stabilibus dignoscendas in unam reduxit, sed minus bene nomen triviale Linnænum antiquius et satis aptum mutavit. Verum est in var. *viridi* folia sæpius subglaberrima, laxiora et longiora quam in typo; sed pedicelli semper plus minusve glanduloso-viscidi, et formæ intermediæ non desunt. Specimina Schousbœana Tingitana quæ benevolentiæ cel. Cosson debeo inter typum et genuinum *H. viride*, Ten. transitum præbent.

FUMANA LÆVIPES (*L.*, sub *Cisto*; *Pers. Syn.* ii. 76, *et DC. Pr.* i. 275, sub *Helianthemo*; *Spach, loc. cit.*).

Mar. sept.—Tetuan! (*Webb Herb.*)! In monte Beni Hosmar!

Mar. merid.—In rupibus supra Seksaoua!
Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

F. CALYCINA, *Clauson*, = F. arbuscula (*Ball, Journ. Bot.* 1873, 300) = Fumana Spachii, var. calycina (*Coss. Index Pl. Mar.* 14).

Frutex humilis, ramosissimus, intricatus, trunco demum diametro pollicari; ramuli recti, rigidi, foliacei; folia alterna, coriacea, infima ovalia, vix lineam longa, superiora ovali-oblonga circa 3 lineas attingentia, suprema brevissima, cum ramulis junioribus puberula; flores in quovis ramulo pauci (2–4); pedicelli subpollicares, demum recurvati; sepala exteriora (epicalyx) brevia, linearia, scabrida, interiora membranacea, carnea, ex costis 3 viridibus hirtulis et nervo 1 utrinque non costato lineata; petala (nondum expansa) calyci æquilonga, saturate flava; semina maxima, in quavis capsula sex, pallida, lævia, oculo armato minute granulata.

Mar. merid.—In regione inferiore Atlantis Majoris admodum rara. Exemplaria duo, jam deflorata, legimus in glareosis ad torrentem Ourika (circ. 1000 m.)! et alterum, nondum florens, in convalle Aït Mesan (circ. 1300 m.)!

Semina illis *F. vulgaris* ter quaterve longiora et latiora. Planta Atlantica a nobis visa multo major est quam spec. quæ postea vidi in herb. Cosson, et mihi a *F. Spachii* Europæa omnino diversa visa est. Melius edoctus ex spec. intermediis Algeriensibus nuper scrutatis hodie hæc stirps insignis sicut subspecies *F. Spachii* enumeranda mihi videtur. Monente cel. Cosson *F. calycinam* legit Balansa in sylva *Callitris* haud procul Mogador. Nascitur etiam in Algeria.

VIOLARIEÆ (*DC. Fl. Fr.* IV. 801).

VIOLA (*L. Gen.* 1007).

V. ODORATA (*L., DC. Pr.* i. 296).
Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (*G. Maw*)!
Mar. merid.—In umbrosis irrigatis urbis Marocco!
Ar. Geog. Europa media. Regio Mediterranea tota (inclusa Macaronesia). Sibiria. Forma orientalis montana *V. suavis*, M. B.; a typo aliquid recedit, sed sicut varietas a cel. Boissier (Fl. Or. i. 458) enumeratur. Specimina nostra ex urbe Marocco carent flore et fructu; forsan referunt varietatem *maderensis* (Lowe, Man. Fl. Mad.).

V. ARBORESCENS (*L., DC. Pr.* i. 299), = V. suberosa (*Desf. Fl. Atl.* ii. 313).
Mar. sept.—Tanger (*Schsb. spec.*)! In rupibus maritimis haud procul Cap. Spartel! In rupibus calcareis prope Tetuan! In monte Beni Hosmar supra Tetuan (exemplaria pulcherrima sesquipedalia et ultra)!

Mar. occid.—Secus rivulum Oued Kseb prope Mogador! ubi eam jam legerat Balansa. In monte Djebel Hadid!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia); prædiligit rupes zonæ sublitoralis.

Ludit foliis latioribus angustioribusve, margine integerrimis vel denticulatis vel serratis, sed hæ notæ nimis inconstantes et veras varietates non sistunt. Confer DC. Prod. l. c.

VIOLA TEZENSIS, *nob.*, = V. modesta (*Ball in Journ. Bot.* 1873, 300; *non Fzl. Ill. Pl. Taur.* p. 41).

E grege *V. tricoloris*, L., et verisimiliter juxta *V. Heldreichianam*, Boiss. collocanda, sed notis plurimis distincta. Folia inferiora ovata, superiora lanceolata in petiolum attenuata, profunde crenata vel crenato-dentata, præsertim margine et nervo medio hirtula. Stipulæ *V. Heldreichianæ*, oblongo-lineares, integræ vel basi externa lacinula auctæ, foliis breviores. Pedicelli glaberrimi, apicem versus bibracteolati. Sepala viridia, oblonga, margine ciliolata, cæterum glabra. Petala calycem vix æquantia. Calcar brevissimum.

Mar. merid.—Exemplar unicum in monte Djebel Tezah alt. circiter 2400 m. detexi!

POLYGALEÆ (*Juss. Ann. Mus.* xiv. 386).

POLYGALA (*L. Gen.* 851).

P. RUPESTRIS (*Pourr. Act. Toul.* iii. 325), = P. saxatilis (*Desf. Fl. Atl.* ii. 128, tab. 175; *DC. Pr.* i. 324).

Mar. occid.—Aïn el Hadjar!

Mar. merid.—In regione inferiore et media Atlantis Majoris, et rarius in planitie. In convalle Aït Mesan 1400–1800 m.! In convalle Amsmiz circ. 1500 m.! In monte Djebel Tezah circ. 1800 m.! Ex prov. Shedma specimen retulerunt cll. Rein et Fritsch!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

P. ROSEA (*Desf. Fl. Atl.* ii. 128, tab. 176; *DC. Pr.* i. 324), = P. Preslii (*Spreng. Syst. Veg.* v. 531) = P. nicæensis (*Risso ex Koch, Syn.* i. 98).

Mar. sept.—Pr. Tanger in monte Djebel Kebir versus Cap. Spartel! In rupibus prope Tetuan! In monte Beni Hosmar! ubi eam jam legerat P. B. Webb.

Ar. Geog. Per regionem Mediterraneam, imprimis occidentalem, late diffusa. Deest in Macaronesia, sed insulas Azoricas incolit.

Icon Fontanesiana supra citata minus bona, sed de identitate stirpis vix dubitandum. Confer tamen Boissier, Fl. Or. i. 475.

P. MONSPELIACA (*L.*, *DC. Pr.* i. 325).

Mar. sept.—In regione collina prope Fondak, inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia), sed potius infrequens.

POLYGALA WEBBIANA (*Coss. in Bull. Soc. Bot. Fr.* xx. 240).

Descriptionem cel. auctoris præferre juvat.

"Planta perennis, ut videtur a basi ramosa, *ramis* diffusis, *teretiusculis*, inferne denudatis pulvinis foliorum delapsorum tuberculatis, superne dense foliosis, pilis arcuato-ascendentibus *dense pubescentibus*. *Folia* eodem modo ac rami sed parcius pubescentia, oblonga, plana, in petiolum contracta, acutiuscula vel inferiora obtusa *haud mucronata*. *Flores* majusculi, in axillis foliorum superiorum *in racemos* brevissimos cymiformes *2–3-floros vel sæpissime abortu unifloros dispositi*, bracteolis 3 membranaceis obovatis amplis deciduis ad basim pedicelli involucrum efformantibus suffulti. *Sepala* omnia *citius decidua*, glabrescentia, 3 *exteriora* albida membranacea vix herbacea *quorum superius* majus *fornicatum subsaccatum* et duo inferiora planiuscula ovata, 2 interiora petaloidea alba vel pallide purpurascentia corollam subæquantia obovata obtusa inferne angustata. *Petala* 3, inter se et cum vagina staminali ad tertiam partem superiorem in tubum superne fissum coalita, duorum lateralium limbo inæquilatero concavo-subcarinato pallide purpurascente apice obtuso, *inferioris limbo* æquilatero concavo-carinato genitalia amplectente apice truncato *in carina* procul ab apice *crista* purpurascente *in lobos* nonnullos *oblongos latiusculos haud incrassatos divisa donato* superne pallide lutescente. Ovarium superne basi glandula stipatum. *Capsula* (immatura tantum visa) membranaceo-carnosula, a latere compressa, *obovata*, apice marginata."

Mar. sept.—Florentem legimus in monte Beni Hosmar supra Tetuan ubi eam olim legit P. B. Webb!; et iterum spec. 2 detexi in rupibus juxta urbem Tetuan! In monte Djebel Moussa supra fretum Herculis eminente legit cl. Blackmore.

Monente cel. Cosson:—"*P. Webbiana*, floribus magnis, in racemos axillares 1–3-floros dispositis, sepalis deciduis, superiore fornicato subsaccato, crista carinali petali inferioris parce et grosse lobata, ad sectionem *Chamæbuxus* pertinet.—A *P. Munbyana* (Boiss. et Reut. Diagn. Pl. Or.' ser. 2, v. 50) differt ramis teretiusculis, non acute angulatis, dense pubescentibus, non glabrescentibus, foliis haud mucronatis, petalis lateralibus haud truncato-obtusis.—A *P. Chamæbuxo*, L., cui valde affinis, distincta indumento ramorum densiore, foliis minus coriaceis haud mucronatis, petalis lateralibus haud truncato-obtusis, lobis cristæ tenuibus planiusculis, non incrassatis subcorculatis."

Facie simillima est *P. Chamæbuxo*, var. *rhodopteræ*, stirpi Alpium Venetarum solenni, sed in hac, præter notas supra indicatas, sepala interiora saturate purpureo-rosea, petala lateralia apice lutescentia; dum in *P. Webbiana*, sepala interiora in viva pallide purpurascentia, petala lateralia læte purpureo-rosea. Folia in *P. Chamæbuxo* longiora, angustiora, nec sensim in petiolum attenuata.

P. Chamæbuxus est Alpium Europæ (latiore sensu) incola, unde in ericetis Bavariæ et per Pannoniam usque Transsylvaniam, necnon per Apenninum Liguriæ in Alpes Apuanas se protendit. Deest in peninsula Iberica et in Pyrenæis et in Europa austro-orientali. Localitas in ducatu Lucemburgensi verisimiliter spuria.

POLYGALA BALANSÆ (*Coss. in Bal. Pl. Maroc.* 1867, *et in Bull. Soc. Bot. Fr.* xx. 240).

Sequitur descriptio Cossoniana:—"*Frutex* erectus, multicaulis, dumosus, divaricatim ramosus, *ramis* rigidis *spinescentibus*, pulvinis foliorum delapsorum tuberculatus, sub lente punctato-puberulus. *Folia parva*, oblongo-linearia, concavo, *cito decidua*. *Racemi* breves, 3–4-flori, *sæpius abortu* 1–2-*flori*. *Sepala* omnia *citius decidua*, glabrescentia, 3 *exteriora* subherbacea margine purpurea, *quorum superius fornicatum subsaccatum* et duo inferiora planiuscula ovata; 2 interiora petaloidea purpurea corollam subæquantia ovata, inferne angustata, superne margine involuto apiculata. *Petala* 3, inter se et cum vagina staminali ad quartam partem superiorem in tubum superne fissum coalita, duorum lateralium limbo inæquilatero concavo-carinato pallide purpureo; *inferioris limbo* latiore æquilatero concavo-carinato genitalia amplectente, apice emarginato, *in carina* infra apicem *crista indivisa* irregulariter plicata *donato*, superne luteo. Ovarium superne basi glandula stipatum. *Capsula* membranaceo-carnosula, a latere compressa, *suborbiculata, apice vix retusa*, angusta, marginata, *venis concentricis* parce ramosis *donata*. Semen nigrescens, pilosum, caruncula triloba lobis lateralibus seminis quartam partem inferiorem attingentibus."

Mar. merid.—Species per clivum septentrionalem Atlantis Majoris hucusque exploratum in saxosis aridis et rupestribus usque 1800 m. s. m. frequentissima. Primus eam detexit cl. Balansa anno 1867. Legimus pr. Tasseremout! Ourika! Seksaoua! In convallibus Aït Mesan! Amsmiz! et alibi vidimus.

Stirps insignis sæpe 6–8-pedalis. Ramis teretibus apice spinescentibus *Spartium scoparium* interdum refert.

Individua minora habitu et facie stirpem Sinaiticam *P. spinescens*, Decaisne, miro modo simulant etsi characteres valde diversi. Species nostra structura floris et fructus ad sectionem *Chamæbuxus* pertinet.

FRANKENIACEÆ (*St.-Hil. Mém. Plac. Cent.* p. 39).

FRANKENIA (*L. Gen.* 445).

F. PULVERULENTA (*L., DC. Pr.* i. 349).

Mar. occid.—Casa Blanca! Mogador!

Mar. merid.—In saxosis aridis Seksaoua!

Ar. Geog. Regio Mediterranea omnis inclusa Macaronesia. Senegalia. Songaria. Olim in Anglia meridionali.

FRANKENIA HIRSUTA (*L., Boiss. Fl. Or.* i. 780; *Schousb. Gew. Marok,* 168). Inclusis *F. lævis* (L., DC. Pr. i. 349; Schousb. Gew. Marok. 167) et *F. intermedia* (DC. eodem loco).

Mar. sept.—Tanger specimen (cui scheda *F. lævis,* L.) ex herb. Schousboe benevole communicavit cel. Cosson! et eandem formam, foliis basi ciliolatis cæterum glaberrimis, legimus prope Cap. Spartel! et prope Tetuan legit Webb! Formam foliis tenuiter tomentellis legi prope Tetuan anno 1851!

Mar. occid.—Casa Blanca in litore Atlantico, formam foliis subtomentellis! et eandem legimus prope Mazagan! Mogador (*Schsb. l. c.*).

Optimo consilio cel. Boissier, *l. c.*, *Frankenias* fere omnes perennes regionis Mediterraneæ sub *F. hirsuta,* L., reduxit. Pace tanti viri varietates *α* et *β* sola præsentia vel absentia tomenti tenuissimi innixas separare nequeo, dum in eodem loco specimina utriusque formæ semel crescunt. Formas sequentes a typo remotiores pro speciebus rite distinctis habuerim, sed characteres nimis instabiles sunt et formæ intermediæ non desunt.

Ar. Geog. F. hirsuta, L., sensu latiore est species late diffusa per oras Atlanticas Europæ et Africæ, ex Britannia ad Cap. Bon. Spei, et per totam regionem Mediterraneam. In Europa media deest, sed terras continentales Asiæ temperatæ non fugit.

—— ——, var. VELUTINA, *nob.*=F. velutina (*DC. Pr.* i. 350).

Stirps insignis differt ab affinibus statura majore, floribus majoribus pulchre roseis, herba tota velutino-canescente; sed specimina intermedia in litore Atlantico lecta hanc cum typo conjungunt.

Mar. occid.—Legimus in rupibus insulæ Mogador! verisimiliter eodem loco ubi eam primus detexit Broussonnet et postea legerunt Schousboe et Balansa. Specimina fere intermedia legimus inter hanc et *F. intermediam,* DC., prope Saffi! et pr. Casa Blanca!

—— ——, var. δ, REVOLUTA, *Boiss. l. c.,*=F. revoluta (*Forsk. Fl. Æg.-arab.* p. 75; *DC. Pr.* i. 350),=F. corymbosa (*Desf. Fl. Atl.* i. 315, tab. 93; *DC. Pr.* i. 350).

Mar. merid.—In planitie aridissima inter Aïn Oumast et Sheshaoua! et iterum prope Misra ben Kara!

Specimina nostra ludibunda. Nonnulla omnino similia spec. ex Ajanque prov. Murcia (*Bourgeau, Pl. d'Esp.* no. 2315), quæ *F. Webbii* (Boiss. et Reut. Pug. 16), et aliis a me olim lectis pr. Almeria et prope Chiclana. Alia propiora sunt *F. pallidæ* (Boiss. et Reut. Diagn. Pl. Or. ser. 2, i. 61), quæ mihi lusus levis nec vera varietas videtur.

F. thymifolia (Desf. Fl. Atl. i. 316; DC. Pr. i. 350) a Schousboe indicatur in arenosis maritimis prope Mogador (*Schousb. Gew. Marok.* 167); nos non vidimus et floræ nostræ videtur dubia civis. Hæc forsan velut subspecies enumeranda est. Facies sat singularis et characteres minus variabiles quam in affinibus. Hujus var. levis mihi videtur *F. Reuteri* (Boiss. Diagn. Pl. Or. ser. 2, i. 60).

CARYOPHYLLEÆ (*Juss. Gen.* 299).

VELEZIA (*L. Gen.* 447).

V. RIGIDA (*L., DC. Pr.* i. 387).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

DIANTHUS (*L. Gen.* 565).

D. ATTENUATUS (*Sm. Trans. Linn. Soc.* ii. 301; *DC. Pr.* i. 358),=D. lusitanus (*Brot. Fl. Lusit.* ii. 177).

Mar. merid.—In regione media et superiore Atlantis Majoris. In convalle Aït Mesan usque in jugo Tagherot a 1800 m. ad 3000 m.! Specimina ex montibus Djebel Ouensa et Djebel Afougueur (*Coll. Indig. Ibrahim*) benevole comm. cel. Cosson sub "*D. lusitanicus*, Brot."

Ar. Geog. Peninsula Iberica. Pyrenæi Orientales. Atlas Maroccanus.

D. lusitanus, a Brotero *loc. cit.* bene descriptus, est sæpius forma multicaulis, caulibus pluries furcatis, petalis profunde inciso-serratis basi pilosiusculis, dum stirps Pyrenaica (*D. attenuatus* typicus) habet ramos pauciores breviores 1–2-floros, petala crenata seu leviter dentata imberbia. Sed hæ notæ a solo et temperie pendent. Vidi ex Pyrenæis orientalibus specimina nullomodo a *D. lusitano* distinguenda. Nostra specimina ex convalle Aït Mesan potius ad formam vulgarem Pyrenaicam; contra quæ debeo humanitati cel. Cosson ad formam Lusitanicam propius accedunt.

D. VIRGINEUS (*L. Sp. Pl.* 590; *Gr. et God. Fl. Fr.* i. 238, *non DC. Pr.* i. 361).

Mar. sept.—? Specimen nondum florens legi in rupibus pr. Tetuan verisimiliter huc referendum!

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan a 1600 m. ad 2000 m.! In monte Djebel Tezah spec. legit J. D. H.!

Ar. Geog. Europa media. Regio Mediterranea occidentalis (exclusa Macaronesia).

D. siculus (*Psl. Del. Prag.* p. 59; *Guss. Fl. Sic.* i. 479).

Mar. occid.—Inter Mogador et Aïn el Hadjar! In monte Djebel Hadid! (forma calycibus coloratis). Inter Mogador et Shedma, G. *Maw, sp.*! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In rupestribus supra Seksaoua! Ourika (*R. et Fr. spec. in herb. Kew.*)!

Ar. Geog. Regio Mediterranea occidentalis, imprimis in calidioribus.

Genus omne deest in Macaronesia. Specimina classica Panormitana et quæ legi in Hispania sunt omnia valde variabilia quoad calycem et squamas externas plus minusve elongatas, chartaceas vel herbaceas, et specimina ex ditione Mogadorensi non minus ludibunda sunt. Quæ legimus pr. Seksaoua propiora *D. virgineo*. An *D. siculus* pro varietate vel subspecie meliore jure enumerandus sit judicet monographus in hoc genere valde desideratus.

DIANTHUS GADITANUS (*Boiss. Diagn. Pl. Or.* ser. 2, i. 67), = D. Hornemanni (*Salzm. Exsic., non Ser. in DC. Pr.* i. 362), = D. Schousbœi (*Coss. MSS.*).

Mar. sept.—Tanger (*Schsb. herb.* sub "*D. glaucus*"), *Coss. spec.*! (*Salzm. Exsicc. in herb. Kew.*)! In monte Beni Hosmar supra Tetuan nondum florentia, sed verisimiliter huc referenda, specim. 2 legimus!

Ar. Geog. Hispania Gaditana et Marocco Tingitanus.

Affinis ut videtur *D. Liboschitziano*, Ser.

TUNICA (*Scop. Fl. Carn.* i. 300).

T. COMPRESSA (*Desf. Fl. Atl.* i. 343. tab. 97, *et DC. Pr.* i. 354, sub *Gypsophila*; *Fisch. et Mey. Ind. Sem.*).

Mar. merid.—Sat frequens in planitie et in calidioribus reg. inferioris Atlantis Majoris. Aïn Oumast! Mskala! Seksaoua! In convalle Amsmiz, circ. 1400 m.!

Ar. Geog. Africa boreali-occidentalis.

T. PROLIFERA (*L., et DC. Pr.* i. 355, sub *Diantho*; *Scop. Fl. Carn.* i. 300).

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan circ. 1500 m.! In monte Djebel Tezah usque 2100 m.!

Ar. Geog. Europa media. Regio Mediterranea (inclusa Macaronesia), sed rara in calidioribus. Orientem versus vix ultra Byzantium se protendit.

SAPONARIA (*L. Gen.* 584).

S. VACCARIA (*L., DC. Pr.* i. 365).

Mar. merid.—In distr. Mesfioua haud procul urbem Marocco spec. unicum legit J. D. H.!

Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia). In regionibus alienis, e. g. Sibiria Altaica et India orientali, verisimiliter cum seminibus introducta.

SILENE (*L. Gen.* 772; *Rohrbach, Monog. Sil.*).

S. INFLATA (*Sm. Fl. Brit.* ii. 292; *DC. Pr.* i. 368), = S. cucubalus (*Wib. Prim. Werth*, 241; *Rohrb. Sil.* 84).

Mar. sept.—Tanger! In monte Beni Hosmar pr. Tetuan! Prope Tetuan (1851)!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Milhain! formam foliis angustioribus legimus in convalle Aït Mesan, alt. 1200–1600 m.!

Ar. Geog. Europa media et borealis. Regio Mediterranea omnis (inclusa Macaronesia). Asia temperata. India orientalis. In America boreali introducta.

—— ——, var. RUBRIFLORA, *nob.* Petalis brevissimis calycem vix excedentibus saturate rubellis.

Mar. sept.—In sepibus prope Tanger!

Nomen triviale ab omnibus fere botanicis receptum cl. Rohrbach infauste mutavit. Si solo antiquitatis jure legamur, *S. vulgaris* erit. Nomen *Behen vulgaris* (Mœnch. Meth.) est enim Wibeliano pluribus annis ántiquius.

S. DISTICHA (*Willd. Enum.* 476; *Rohrb. Sil.* 96), = S. parvifolia (*Otth in DC. Pr.* i. 376, *non Zea, in Poir. Dict. Suppl.*).

Mar. sept.—Specimen ex herb. Schousboe in monte Djebel Kebir pr. Tanger lectum sub "*S. hirsuta*" Schsb. herb., benevole comm. Cosson.

Ar. Geog. Algeria. Ins. Baleares. Ditio Tingitana.

S. GALLICA (*L., DC. Pr.* i. 371; *Rohrb. Sil.* 96).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Cap. Spartel! Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca!

—— ——, var. MINOR, magis pilosa, = S. sardoa, *Moris.*?

Mar. merid.—Mesfioua haud procul urbem Marocco!

Hæc est verisimiliter *S. lusitanica* (L. Sp. Pl. i. 416).

Ar. Geog. Species verisimiliter Europæ mediæ et australis indigena, per totam fere orbem introducta et facta spontanea; ex cœli et soli diversitate formæ plurimæ enatæ pro speciebus distinctis ab auctoribus descriptæ.

S. CERASTOIDES (*L., DC. Pr.* i. 372; *Rohrb. Sil.* 38), var. ANOMALA (*Ball, Journ. Bot.* 1873, 301).

Habitu et seminum structura typo omnino conformis, sed insigniter differt calyce subevenio, nervis in parte calycis superiore obscure anastomosantibus, et filamentis basi puberulis.

Mar. merid.—Prope Mzouda!

Forsan melius cognita pro specie diversa habenda.

Ar. Geog. Species per regionem Mediterraneam (exclusa Macaronesia) dispersa.

S. Giraldii (Guss. Fl. Inar. 36), quæ gaudet seminibus et calyce *S. gallicæ* et filamentis glabris *S. cerastoidis,* mihi videtur varietas prioris, nec cum *S. cerastoide* adsocianda.

S. TRIDENTATA (*Desf. Fl. Atl.* i. 349; *DC. Pr.* i. 371; *Rohrb. Sil.* 99).

Mar. merid.—Amsmiz ad radices Atlantis Majoris!

Ar. Geog. Africa boreali-occidentalis. Peninsula Iberica. Macaronesia.

Priori similis sed ut videtur bene distincta species, floribus subsessilibus, calyce ex nervis eminentibus eximie costato, fructifero ore contracto dentibus longis divergentibus, capsula subsessili globosa longe rostrata, nec, ut in *S. cerastoidi*, ovoidea carpophoro brevi falcrata et rostro brevi prædita.

SILENE NOCTURNA (*L., DC. Pr.* i. 372; *Rohrb. Sil.* 100).

Mar. merid.—Hinc inde in regione inferiore et in convallibus calidioribus Atlantis Majoris. In convalle Aït Mesan circ. 1300 m.! Prope Mzouda! Ourika (*R. et Ft. spec. in herb. Kew.*)! Seksaoua (*J. D. H.*)!

—— ——, β, PARVIFLORA (*Otth in DC. Pr. l. c.*),= var. micrantha (*Willk. Ic. et Desc.* i. 69, tab. 50),=var. γ, permixta (*Rohrb. l. c.*), =S. permixta (*Jord. Pug. Pl. Nov.* 32), = S. mutabilis (*L. Sp. Pl.* 596)?

Mar. merid.—Tasseremout!

Ar. Geog. Species per regionem Mediterraneam (inclusa Macaronesia) late diffusa. In America boreali advena.

Var. nostra e tvar. *brachypetala* (Rohrb. *l. c.*) verisimiliter per totam aream inveniendæ.

S. decipiens (*Ball in Journ. Bot.* 1873, 300).

Proxima *S. nocturnæ*, cui facie similis; differt tamen pedicellis parce glandulosis vix viscidulis, calyce fructifero ex nervis fusco-viridibus costato, dentibus erecto-patentibus capsulam superantibus, ejus diametrum æquantibus, petalis capsulam vix superantibus, lamina brevi atrorubente, seminibus minimis dorso vix canaliculatis.

Mar. occid.—Legimus in arenosis prope Casa Blanca!

Mar. merid.—Specimen incompletum sed cæteris plane conforme legi prope Amsmiz ad radices Atlantis, alt. circ. 1100 m.!

Stirps singularis calyce et seminibus a *S. nocturna* nimis diversa ut pro varietate haberetur.

S. OBTUSIFOLIA (*Willd. Enum.* p. 473; *DC. Pr.* i. 374; *Rohrb. Sil.* 102),=S. colorata (*Schousb.* ex *Horn. H. Hafn.* i. 412; *DC. Pr.* i. 374, *non Poir.*).

Mar. sept.—In arenosis pr. Tanger! In arenosis maritimis inter Tetuan et Ceuta!

Ar. Geog. Peninsula Iberica. Macaronesia. Africa boreali-occidentalis. Habitat etiam in Ægypto inferiore (*ex Boiss. Fl. Or.* i. 593).

S. HIRSUTA (*Lag. Var. de Cienc.* 1805, 212; *Rohrb. Sil.* 102, *non Poir. Voy.*),=S. hirsutissima (*Otth in DC. Pr.* i. 372), var. TUBERCULATA, *nob.*

Mar. sept.—In monte Djebel Kebir pr. Tanger die 13 Jun. 1871, florentem et fructiferam legi! Ex eodem monte specimina seminibus nondum maturis a b. Schousboe lecta (*S. pilosa*, Schsb. herb.) benevole communicavit cel. Cosson. Eandem varietatem, nisi fallor, sistit *S. hispida*, Salzm. Exsicc. Tingitana.

Mar. occid.—Specimina jam deflorata legi prope Casa Blanca (Apr. 22, 1871) seminibus spec. nostris Tingitanis omnino conformibus.

Hæc varietas speciminibus typicis *S. hirsutæ* quæ in Hispania legi et pluries habui omnino conformis est, nisi seminibus dorso et præsertim margine tuberculatis, facie paululum depressis nullomodo excavatis. Speciminibus plurimis Hispanicis accurate scrutatis transitum nullum detexi; demum specimen *S. hirsutæ* prope Malaga a Rambur lectum semina nostris valde accedentia mihi præbuit. Semina in genere *Silene* notas optimas diagnosticas inter species affines præbuerunt, sed *vis variativa* naturæ, vitæ socia inseparabilis, etiam in seminum structura se palam facit.

Utrum *S. hirsuta*, Lag., a *S. vespertina* (Retz. Obs. Bot. iii. 31; Rohrb. Sil. 95, non auctorum plurimorum) probe distincta sit est mihi res valde dubia. Pace cl. Rohrbach inter semina utriusque speciei discrimen vix ullum invenies, nec notæ differentiales ex inflorescentia allatæ satis constantes. Calyces dentes in *S. vespertina* supra capsulam contracti forsan ad speciem dignoscendam satis valent. *S. vespertina*, Retz, ab auctoribus fere omnibus cum specie omnino diversa (*S. colorata*, Poir.) confusa, a Rohrbach *loc. cit.* suo loco restituta fuit. Hujus synonyma sunt *S. hirsuta* (Poir. Voy. ii. 163), *S. hispida* (Dsf. Fl. Atl. i. 348), *S. bellidifolia* (Jacq. Hort. Vind., non Pourr.), et *S. sabuletorum*, Dub., non Lk.

S. hirsuta genuina est peninsulæ Ibericæ civis, formæ affines in Italia calidiore et Græcia et in Africa boreali obviæ sunt.

SILENE PSAMMITIS (*Link in Spreng. Nov. Prov.* p. 39), = S. villosa (*Boiss. Voy. Esp.* ii. 90, non aliorum), = S. lasiostyla (*Boiss. Diagn. Pl. Or.* ser. 1, viii. 79).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Species propria peninsulæ Ibericæ et ditionis Tingitanæ.

S. COLORATA (*Poir. Voy.* ii. 163; *Rohrb. Sil.* 114, *non W., nec Schousb., nec DC. Pr.* i. 374), = S. bipartita (*Desf. Fl. Atl.* i. 352, et *Willk. Ic. et Descr.* i. 45, tab. 30), = S. sericea (*Guss. et auct. plurim., non All.*), = S. vespertina (*Rchb. Ic. Fl. Germ.* tab. 279, *et auct. mult., non Retz., nec Boiss. Voy.*).

Mar. sept.—Tanger! (*Salzm. Exsicc.* sub *S. vespertina*)! Inter Tetuan et Tanger! Prope Tetuan (1851 et iterum 1871)!

Mar. occid.—Prope Mogador! ‘Aïn el Hadjar!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

—— ——, var. LASIOCALYX (*Soy. W. et God. Sil. Alg.* p. 26, sub *S. bipartita*).

Mar. occid.—In arenosis maritimis prope Mazagan!

SILENE SETACEA (*Viv. Fl. Lib.* 23; *Rohrb. Sil.* 105, *non Otth*), = S. colorata, var. angustifolia, *nob. olim.*

Mar. merid.—In regione inferiore pr. Mesfioua! Ourika! Sektana (*R. et Fr. spec. in herb. Kew.*)!

Accedit ad *S. coloratam* var. *β, decumbens,* Rohrb. *l. c.*, = *S. decumbens* (Biv. Cent. i. 75); sed in *S. setacea* folia omnia tenuia linearia, vel infima lineari-oblonga, caulis tenuis e basi ramosus, tota planta pube tenui adspersa. *S. coloratæ* affinis et post eam enumeranda.

Ar. Geog. In regione desertorum ex Mesopotamia et Palæstina per Africam borealem interiorem diffusa.

S. GLAUCA (*Pourr. El. H. Matr.* 1803; *Lag. Gen. et Sp.* p. 15; *Rohrb. Sil.* 117), = S. secundiflora (*Otth in DC. Pr.* i. 375), = S. ambigua, *Cambess. in Soy. W. et God. Sil. Alg.* 24).

Synonyma alia plurima in Rohrb. *l. c.*

Mar. sept.—Tanger (*Salzm. Exsicc.,* sub *S. decumbens, fide Willk. Ic. et Descr., et Rohrbach, l. c.*).

Ar. Geog. Peninsula Iberica. Algeria et forsan ager Tingitanus.

Floræ Maroccanæ dubia civis. Salzmann hanc speciem legit prope Malaga et forsan inter plantas suas Tingitanas specimina nonnulla commiscuit. Qui series Salzmannianas habuerunt plurimi botanici hanc a Tingide nunquam viderunt, et ager Tingitanus a multis botanophilis perlustratus speciem hanc nemini post Salzmann obtulit.

S. APETALA (*Willd. Sp. Pl.* ii. 307; *DC. Pr.* i. 369; *Rohrb. Sil.* 118).

Mar. sept.—Prope Tetuan!

Mar. merid.—Prov. Shedma! Sheshaoua! Mesfioua! Seksaoua!

Ar. Geog. In regione Mediterranea calidiore ex Affghanistan usque Macaronesiam late diffusa. Deest in Europa in reg. inter Atticam et Hispaniam Murcicam, et in Africa boreali inter Mare Rubrum et Mostaganem.

S. CORRUGATA (*Ball in Journ. Bot.* 1873, 301), = S. canariensis (*Willd. in Spreng.*)? Nomen verisimiliter falsum.

E collo radicis ramosissima, diffusa, glanduloso-pilosa; folia inferiora spathulato-acuminata, superiora lanceolata; pedicelli calycem demum æquantes; bracteæ 2 inæquales, major herbacea, minor subsetacea; flores distantes, ante anthesin nutantes; calyx membranaceus, viridi-striatus, nervis parallelis, basi truncatus, vix umbilicatus; petala carnea, biloba, ungue quam calyx longiori; carpophorum capsulæ æquilongum; semina fusca, sat profunde canaliculata, dorso corrugata.

Mar. merid.—In regione media Atlantis Majoris; Aït Mesan! circa 1750 m.!

Affinis *Silene pseudo-Atocion,* Dsf., a pl. nostra differt petalis integris, seminibus multo majoribus vix canaliculatis, calycis tubo longiore. Habitu propior est *S. pendula,* structura omnino diversa.

Monente cel. Cosson spec. nostra ad *S. Canariensem* (Willd. in Spreng. Neue Entd. iii. 60; Rohrb. Sil. 194, non Otth in DC. Pr. i. 372, referenda sunt, et eandem plantam legit Balansa, anno 1867, in monte Djebel Haid, et secus rivulum Oued Kseb prope Mogador. Vix dubito specimen in herb. Willd. (No. 8633) a Broussonnet communicatum ex ditione Mogadorensi ortum esse, et errore schedæ ex insula Teneriffa prodisse fertur. Dum nomen *Canariensis* incertum et falsum videtur, plantam enumeravi sub nomine triviali a me proposito. Judicent magistri scientiæ nostræ. Icon Webbiana (Phyt. Can. tab. 18) minime exacta vix ad plantam nostram referenda est.

—— ——, var. ADUSTA, = S. adusta (*Ball in Journ. Bot. l. c.*). Proxima præcedenti et pro subspecie a me olim edita.

Planta pumila, erecta, pauciflora; differt insuper a *S. corrugata* foliis angustioribus, bracteis subæqualibus setaceis, petalis albidis, magis profunde bilobis, seminibus (non omnino maturis) pallide luteo-fuscis minus profunde canaliculatis, in fossa dorsali tuberculosis.

Mar. merid.—Prope Seksaoua! in rupibus calidissimis.

S. RUBELLA (*L., DC. Pr.* i. 369; *Rohrb. Sil.* 155).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. merid.—In planitie Maroccana pr. Sheshaoua!

Ar. Geog. Regio Mediterranea, imprimis occidentalis. In Oriente, admodum rara, deest in Macaronesia.

S. INAPERTA (*L., DC. Pr.* i. 376; *Rohrb. Sil.* 165).

Mar. merid.—Ad radices Atlantis Majoris pr. Amsmiz!

Ar. Geog. Regio Mediterranea occidentalis a Corsica et Galloprovincia usque Macaronesiam.

S. MUSCIPULA (*L., Rohrb. Sil.* 170, *non DC. Prod.*), = S. stricta (*DC. Pr.* i. 379, *non L.*).

Mar. merid.—In regione inferiore Atlantis Majoris. Distr. Reraya! In convalle Aït Mesan! Amsmiz! Mzouda! Oued Ghagaia (*Balansa*), *Coss. Index.*

Ar. Geog. Regio Mediterranea, imprimis occidentalis. Deest in Macaronesia, et rarius in Oriente occurrit, forsan cum seminibus introducta.

Silene stricta (L., Rohrb. Sil. 170), = *S. pteropleura* (Boiss. et Reut. Pug. 18), species affinis sed bene distincta, nascitur in Hispania australi proxima (e. g. pr. San Roque!); hactenus in Imp. Maroccano desideratur.

S. ITALICA (*L.,* sub *Cucubalo, Pers. Syn.* i. 498; *DC. Pr.* i. 381; *Rohrb. Sil.* 218).

Mar. sept.—In monte Beni Hosmar supra Tetuan legit P. B. Webb. Specimen habui ex herb. Webb sub "*S. viscosa*"!

Mar. merid.—In regione inferiore et media Atlantis Majoris. In convalle Aït Mesan (forma typica) circ. 1400 m.! In monte Djebel Tezah (forma depauperata) usque 1900 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). Forma arcte affinis (*S. nemoralis*, W. K.) in Germania orientali, Hungaria, et Rossia meridionali.

SILENE MOLLISSIMA (*L.*, sub *Cucubulo, Sibth. et Sm. Pr. Fl. Gr.* i. 298; *Rohrb. Sil.* 226, *non DC. Pr.* i. 382),=S. velutina (*Pourr. in Herb. Dsf.*; *DC. Pr.* i. 373; *Willk. Ic. et Desc.* tab. 43),=S. Salzmanni *Otth in DC. Pr.* i. 381, *non Bad.*). Var. rosulata,=S. rosulata (*Soy. W. et God. Sil. Alg.* 50, *Exp. bot. Alg.* tab. 82).

Mar. sept.—Tanger!

Ar. Geog. Peninsula Iberica. Africa borealis. Corsica. Scriptores Floræ Orientalis, et imprimis cel. Boissier, siluerunt de hac specie, a Sibthorp, *l. c.* indicata inter Smyrnam et Bursam.

Notæ diagnosticæ quibus *S. rosulata* a *S. mollissima* distinguitur mihi videntur nimis leves et instabiles. Specimen unicum nostrum Tingitanum simillimum est spec. *S. gibraltaricæ* in monte Djebel Santo prope Oran lectis. Quæ vidi et ipse legi in rupibus Gibraltar orientem spectantibus paululum diversa sunt et aliam varietatem sistunt.

—— ——, var. GIBRALTARICA,=S. tomentosa (*Otth in DC. Pr.* i. 383), =S. gibraltarica (*Boiss. El.* p. 29, *et Voy. Esp.* tab. 266; *Rohrb. Sil.* 227).

Mar. sept.—Prope Tetuan legit Webb (spec. in herb. nostro sub "*S. viscoso*")!

Ar. Geog. Nascitur in fissuris rupium Gibraltar et in rupestribus Tetuanensibus.

Pace cl. Rohrbach, ex descriptione incompleta, sed omnino conformi, et loco natali plane apparet *S. tomentosa* esse stirps ipsissima quæ postea cel. Boissier melius descripsit et illustravit. Hanc ego olim legi in rupibus Gibraltar orientem spectantibus iconi Boissierianæ simillimam; sed, ut mihi videtur, est nil nisi var. *S. mollissimæ* quæ fatente cel. Boissier in rupibus septentrionem versus ejusdam montis nascitur.

S. LÆTA (*Ait. H. Kew.* ii. 118, sub *Lychnide, Al. Br. in Flora*, 1843, 373; *Gren. et God. Fl. Fr.* i. 220).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Ar. Geog. Peninsula Iberica, Gallia austro-occidentalis. Ditio Tingitana.

LYCHNIS (*L. Gen.* 584; *DC. Fl. Fr.* iv. 761).

L. CŒLI ROSA (*L.*, sub *Agrostemma*; *Desr. in Lam. Dict.* iii. 644; *DC. Pr.* i. 386).

Mar. sept.—Prope Tetuan legit P. B. Webb! flores, sec. MSS. Webb., albi.

Ar. Geog. Peninsula Iberica. Gallia meridionalis. Italia. Dalmatia. Ditio Tingitana.

—— ——, var. ASPERA (*DC. Pr. l. c.*).

Mar. sept.—Tanger (*Webb Herb.*)! (*Schousb. spec.*)!

LYCHNIS MACROCARPA (*Boiss. et Reut. Diagn. Pl. Hisp.* p. 8; *Expl. Scient. Alg.* tab. 80).

Mar. merid.—Ad radices Atlantis Majoris prope Amsmiz!

Ar. Geog. Peninsula Iberica. Africa borealis.

L. DIURNA (*Sibth. Fl. Ox.* 145; *Koch, Syn. Fl. Germ.* i. 146),=L. dioica, var *a*, *L.*,=L. sylvestris (*DC. Pr.* i. 386),=Melandrium pratense (*Rœhl. Deutsch. Fl.* i. 254; *Boiss. Fl. Or.* i. 660).

Mar. sept.—In itinere inter Tanger et Tetuan specimen unicum legit *J. D. H.*!

Ar. Geog. Europa fere omnis, exclusa arctica. Africa boreali-occidentalis.

HOLOSTEUM (*L. Gen.* 333).

H. UMBELLATUM (*L.*, *DC. Pr.* i. 393).

Mar. merid.—In regione media Atlantis Majoris. Supra Arround circ. 2300 m.! In monte Djebel Tezah circ. 2100 m.!

Ar. Geog. Europa media. Regio Mediterranea omnis (exclusa Macaronesia).

CERASTIUM (*L. Gen.* 585).

C. GLAUCUM (*Gren. Mon. Cer.* 47), var. OCTANDRUM (*Gren. l. c.*),= C. tenue (*Viv. Tent. Fl. Cors.* 7),=Mœnchia octandra (*Gay in Perr. Cat. Fréjus*, 55).

Mar. sept.—Tanger! (*Schsb. spec.*)! (*Salzm. Exsicc.* sub *Sagina octandra*)! (*Webb Herb.*)! Prope Tetuan!

Ar. Geog. Species a Greniero *l. c.* definita per Europam mediam et regionem Mediterraneam (exclusa Macaronesia) diffusa, fit rarior in Asia Mediterranea.

C. GLOMERATUM (*Thuill. Par.* 225; *Koch, Syn. Fl. Germ.* i. 132),= C. vulgatum (*Sm. Fl. Brit.* ii. 496; *DC. Pr.* i. 415),=C. viscosum (*Gren. Mon.* p. 25; *Boiss. Fl. Or.* i. 722).

Mar. sept.—Tanger! Cap. Spartel! Prope Tetuan!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In planitie et in Atlante Majore usque in regionem subalpinam. Mesfioua! In convalle Aït Mesan usque 2400 m.! In monte Djebel Tezah circ. 2200 m.!

Ar. Geog. Species per orbem terrarum fere totum diffusa, vestigia hominum et animalium secuta.

Monentibus celebb. Mertens et Koch, Bentham, aliisque magistris, nomina Linnæana *C. vulgatum* et *C. viscosum* diu vexata et ab ipso auctore in Herbario confusa hodie negligenda videntur.

C. PUMILUM (*Curt. Fl. Lond.* i. fasc. 6, tab. 30; *Gren. Mon. Cer.* 33), =C. pentandrum (*Moris Fl. Sard.* i. 266, *an L.? an DC. Pr.* i. 416).

Mar. sept.—Prope Tanger et inter Tanger et Tetuan legit Lagrange sec. Cosson. In monte Beni Hosmar supra Tetuan specimen nanum inter radices gramineæ cujusdam inveni, nimis incompletum et ideo incertum.

Ar. Geog. Per Europam totam (exclusa arctica) et verisimiliter per omnem regionem Mediterraneam diffusum. Synonymia auctorum incerta. In Macaronesia hæc species et affines hucusque non detectæ.

Cerastium brachypetalum (*Desp. in Pers. Syn.* i. 520; *DC. Pr.* i. 416; *Gren. Mon. Cer.* 36).

Mar. sept.—In monte Beni Hosmar supra Tetuan!

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan supra Arround, circ. 2400 m.! In monte Djebel Tezah usque 2600 m.!

Ar. Geog. Europa media. Regio Mediterranea omnis (exclusa Macaronesia).

Facie a typo Europæo paululum differt, sed notis gravioribus, et præsertim petalorum unguibus basi barbatis, bracteis herbaceis, inflorescentiæ indole, huc referendum.

C. arvense (*L.*, *DC. Pr.* i. 419), = C. mutabile (*Gren. Mon. Cer.* 68) pro parte.

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan a 1800 m. usque 2300 m.! In monte Djebel Tezah circ. 2000 m. In jugo Tagherot (*R. et Fr. in Herb. Kew.*)!

Ar. Geog. Herba amphigea. Per omnem Europam, Asiam temperatam, Americam borealem et per montes regionis Mediterraneæ (inclusa Macaronesia) diffusa; nec deest in America australi frigidiore.

Stellaria (*L. Gen.* 568).

S. media (*L.*, sub *Alsine*; *DC. Pr.* i. 397).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Mesfioua! In convalle Aït Mesan usque 1400 m.! verisimiliter communis sed cito marcescens.

Ar. Geog. Per orbem terrarum fere totum diffusa, hominum et animalium (imprimis avium) vestigia secuta.

—— ——, var. major, *Koch*, = S. latifolia (*Pers. Syn.* i. 501; *DC. Pr.* i. 396), = S. neglecta (*Weihe in Bluff et Fingerh. Comp. Germ.* i. 560).

Mar. sept.—Inter Tanger et Tetuan spec. legit J. D. H.!

Ar. Geog. Varietas in umbrosis regionis Mediterraneæ et Europæ calidioris frequens.

S. uliginosa (*Murr. Prod. Goett.* 55; *Rchb. Ic.* fig. 3669), = S. aquatica (*Poll. Pl. Pal.* No. 422; *DC. Pr.* i. 398).

Mar. merid.—In regione subalpina Atlantis Majoris. In ascensu versus jugum Tagherot ultra 2500 m.!

Ar. Geog. In temperatis frigidioribus hemisphæræ borealis. In reg. subalpina montium regionis Mediterraneæ rarius occurrit. Hucusque quoad sciam in Africa non detecta fuit.

STELLARIA ARENARIA (*Salzm. Exsicc.*; *an L. et DC. Pr.* i. 398 ?).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Species mihi non satis cognita, facie *Arenariæ spathulatæ*, Dsf., valde similis. An propria ditionis Tingitanæ?

ARENARIA (*L. Gen.* 777).

Genus a celebb. Bentham et Hooker (Gen. Plant. i. 149) reformatum genera plurima auctorum notis non satis firmis definita includit, quæ sistunt sectiones sequentes. 1. *Arenaria* (auct. recent.). 2. *Mœhringia* (L. Gen. 494). 3. *Rhodalsine* (Gay, in Ann. Sc. Nat. ser. 3, iv. 25). 4. *Alsine* (Wahl. Fl. Lapp. 125). 5. *Minuartia* (L. Gen. 107). 6. *Cherleria* (L. Gen. 570). 7. *Hymenella* (DC. Pr. i. 389). 8. *Gouffieia* (Rob. et Cast. in DC. Fl. Fr. v. 609). 9. *Lepyrodiclis* (Fenzl, in Endl. Gen. Pl. p. 966). 10. *Ammoderia* (Gmel. Fl. Sib. iv. 160). 11. *Merckia* (Fisch. ex Cham. et Schlecht. in Linnæa, i. 59).

A. PUNGENS (*Clem. in Lag. Gen. et Sp.* 15; *DC. Pr.* i. 403).

Mar. merid.—In reg. subalpina Atlantis Majoris. In monte Djebel Tezah circ. 2500 m.!

Ar. Geog. Montes Hispaniæ Granatensis. Atlas Major.

—— ——, var. GLABRESCENS (*Ball, in Journ. Bot.* 1873, 301).

Differt a typo Hispanico sepalis glabris, nervo medio prominulo basin versus ciliato, caulibus subglaberrimis, foliis ad basin membranaceam connatis ciliatis, antheris fusco-griseis, nec rubentibus.

Mar. merid.—In regione subalpina Atlantis Majoris, Aït Mesan! versus 2500 m.!

A. SERPYLLIFOLIA (*L., DC. Pr.* i. 411).

Mar. merid.—In planitie Maroccana et in Atlante Majore. Mesfioua haud procul urbe Marocco! Ourika! Aït Mesan 2000–2200 m.! In jugo Tagherot usque 2800 m.! In monte Djebel Tezah circ. 2200 m.!

Ar. Geog. Species per Europam fere omnem et Asiam temperatam et regionem Mediterraneam (inclusa Macaronesia) late diffusa. In ditione Tingitana nondum detecta.

Specimina nostra sæpe inter typum et *A. leptocladon* (Rchb. Cent. xv. tab. 32,=*A. serpyllifolia*, var. *tenuoir*, Koch) media videntur.

In distr. Reraya ad radices Atlantis Majoris legi specimina duo nana nimis incompleta ad *Arenarias* e grege *A. serpyllifoliæ* referenda. In his folia in petiolum brevissimum margine ciliatum sensim attenuata, sepala acuminata pubescenti-scabra, apice setis longioribus coronata. An spec. nova?

A. SPATHULATA (*Desf. Fl. Atl.* i. 358; *DC. Pr.* i. 413),=Stellaria arenaria (*L., Sp. Pl. App.* 1196),=Arenaria cerastoides (*Poir. Dict.* vi. 363).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Inter Tanger et Tetuan!

Ar. Geog. Africa boreali-occidentalis. Hispania Granatensis.

ARENARIA EMARGINATA (*Brot. Fl. Lus.* ii. 202; *DC. Pr.* i. 406),= A. rosea (*Salzm. Exsicc.*),=A. bætica (*Salzm. Exsicc.*).

Mar. sept.—Prope Tanger! (*Salzm. Exsicc.* sub *A. rosea*)! (*Webb Herb.*)! In monte Djebel Kebir (*spec. ex Herb. Schsb.*)!

Ar. Geog. Peninsula Iberica. Ditio Tingitana.

Ipse auctor speciei et cl. Seringe in DC. Pr. *l. c.* affinitatem proximam cum *A. tenuifolia* viderunt adeo ut de diversitate specifica dubitarunt. Facie est revera similis, nisi petalis emarginatis calyce longioribus, sed structura omnino diversa. In hac capsula *Arenariæ* genuinæ valvis profunde bidentatis, dum *A. tenuifolia* in § *Alsine* (capsulæ valvis integris) retinenda. Ego semper vidi petala calyce sesquilongiora, nec breviora ut dantur in auct. citatis.

A. TRINERVIA (*L.*, *DC. Pr.* i. 412),= Mœhringia trinervia (*Clairv. Man. Herb.* 150, *et plurim. auct. recent.*).

Mar. sept.—In monte Djebel Kebir pr. Tanger! In monte Beni Hosmar supra Tetuan!

Ar. Geog. Europa et Asia temperata. In umbrosis reg. Mediterraneæ Europæ et Asiæ et in Macaronesia infrequens. In Africa boreali rara.

A. PROCUMBENS (*Vahl, Symb.* i. 50, tab. 33; *DC. Pr.* i. 413),=A. geniculata (*Poir. Dict.* vi. 365),=Rhodalsine procumbens (*Gay, Ann. Sc. Nat.* ser. 3, x. 25).

Mar. sept.—Prope Tetuan ad ostium fluminis (1851)! Inter Tetuan et Ceuta!

Mar. occid.—Mogador! (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in planitie et in regione inferiore Atlantis Majoris. Prov. Haha! Prov. Shedma! Prope Amsmiz! In convalle Aït Mesan usque 1400 m.! Prov. Ksima (*Coll. Indig, Mardochæus*), *Coss. Index.*

Ar. Geog. Regio Mediterranea Europæ et Africæ borealis. Adest etiam in Macaronesia, sed in Asia Mediterranea desideratur.

Species satis ludibunda quoad formam foliorum et longitudinem sepalorum, sed varietates stabilire inutile duco.

A. TENUIFOLIA (*L.*, *DC. Pr.* i. 405),=Alsine tenuifolia *auct. plurim.*

Mar. sept.—In monte Beni Hosmar supra Tetuan specimen unicum legi!

Ar. Geog. Europa media. Asia temperata. Regio Mediterranea omnis (exclusa Macaronesia).

—— ——, var. **GLANDULOSA**,=A. viscidula (*Thuill. Par.* 219).

Mar. merid.—In saxosis pr. Seksaoua! Milhain!

Ar. Geog. Fere per totam aream speciei imprimis calidiorem diffusa.

ARENARIA FASCICULATA (*Gouan, Ill.* p. 30; *Jacq. Austr.* tab. 182;

DC. Pr. i. 407, *non Sibth. et Sm. Fl. Gr.* v. 30),=Alsine Jacquini (*Koch, Syn. Fl. Germ.* 125, *et auct. plurim.*).

Mar. merid.—In regione subalpina Atlantis Majoris in convalle Aït Mesan a 2200 m. usque 2500 m. !

Ar. Geog. Europa media, in regione Mediterranea rarius obvia. Citatur in Albania a cel. Grisebach et in montibus Velebith a cel. Visiani. In latere meridionali Alpium Europæ haud infrequens, sed in regionem inferiorem vix descendit.

Nomen triviale *A. fasciculata* a Gouan prius publici juris factum. Quid sit *A. fasciculata*, L. Spec. Pl. ed. 12, iv. 733, eruere non potui. Planta Floræ Græcæ est *Alsine Smithii* (Fzl. Alsin. 57),= *Alsine lancifolia* (Vis. Ic. Fl. Dalm.),=*Alsine fasciculata* (Maly, Enum. Austr. 295, et Vis. Fl. Dalm. iii. 177, tab. xxxiv.). A sp. nostra differt sepalis trinervibus, foliis 5–7-nervibus, cæterisque notis gravioribus.

Specimina nostra a typo Europæo parum diversa sunt sepalis minus inæqualibus. Radix annua vel biennis, vel interdum (?) perennans.

A. SETACEA (*Thuill. Par.* ed. 2, 220; *DC. Pr.* i. 407),=Alsine setacea (*M. K. et auct. plurim.*). Var. ATLANTICA, *nob.*, cui simillima *A. erythrosepala* (Boiss. Diagn. Pl. Or. ser. 1, viii. 98, *et* Fl. Or. i. 679).

Mar. merid.—In regione subalpina et alpina Atlantis Majoris. In jugo Tagherot usque 3100 m.! In monte Djebel Tezah, *J. D. H.*!

Ar. Geog. Species polymorpha per montes regionis Mediterraneæ ex Atlante usque Persiam, et inde in Sibiriam Uralensem diffusa. In Europa media obvia, fit rarior occidentem versus. Deest in Macaronesia, in montibus peninsulæ Ibericæ (?) et in Alpibus Europæ.

Specimina nostra pluribus notis inter *A. setaceam*, Thuill., et *A. fasciculatam*, Gouan, media sunt, et re vera illa, nisi radice perenni, ab hac ægre dignoscitur. Sepala in specim. nostris basin versus obscure trinervia sunt, præsertim in statu juniore; inflorescentia fere *A. setaceæ* typicæ, sed interdum cymoso-corymbosa; folia trinervia, brevia, adpressa, apice cartilagineo prædita.

Cel. Boissier (Fl. Or. i. 680) sex formas seu varietates *A. setaceæ* enumeravit, quibus, pace tanti viri, addendæ sunt *A. erythrosepala*, Boiss., et *A. libanotica*, Boiss. His adjungenda erit *Arenaria filifolia* (Forsk. Fl. Æg.-Arab. p. 211) quæ monente beato J. Gay est *Alsine Schimperi*, Hochst., stirps in montibus Abyssiniæ et Arabiæ obvia. Nostræ plantæ valde proxima est No. 983, Balansa, Pl. d'Algérie (*Alsine setacea*, M. K., var., sec. Cosson). Specimina a monte Djebel Tougourt, Bal. Pl. d'Alg. No. 856 (*Alsine setacea*, var. *pubescens*, Coss.), gaudent habitu diverso et facie potius *A. juniperinæ*. De his novissimis in notula MS. b. Gay scripsit "ab *A. setacea* sine dubio distinctissima." Frustra tamen notas diagnosticas quæsivi. Semina (in spec. nostris nimis immatura) nullomodo ab *A. setacea* diversa videntur.

ARENARIA VERNA (*L., DC. Pr.* i. 405), = Alsine verna *auct. plurim.*, var. BRACHYPETALA, petalis calyce paullo brevioribus oblongo-ellipticis.

Mar. merid.—In regione subalpina et alpina Atlantis Majoris. In jugo Tagherot 2500–3000 m.! In monte Djebel Tezah circ. 2500 m.!

Ar. Geog. Europa media. Asia media et borealis. Montes regionis Mediterraneæ (exclusa Macaronesia).

BUFFONIA (*L. Gen.* 168).

B. TENUIFOLIA (*L. Sp.* 179, *et Herb. ex. b. J. Gay*), = B. annua (*DC. Fl. Fr.* iv. 768, *et Prod.* i. 388).

Mar. merid.—Ad radices Atlantis Majoris sat frequens. Pr. Ourika! Reraya! Gurguri! Seksaoua! et in convalle Aït Mesan!

Ar. Geog. Gallia australis. Hispania. Græcia et (*ex Led.*) prov. Transcaucasicæ.

Radix interdum fit biennis. Specimen legi in distr. Reraya ramis anni præcedentis jam emarcidis, glomerulis floralibus in axillis foliorum præditis, ramis hornotinis inflorescentia racemosa typica donatis.

SAGINA (*L. Gen.* 236).

S. PROCUMBENS (*L., DC. Pr.* i. 389), var. PARVIFLORA, *nob.*

Mar. merid.—In regione subalpina Atlantis Majoris. In jugo Tagherot versus 2600 m.! In monte Djebel Tezah circa 2500 m.!

Ar. Geog. Europa fere omnis et Asia temperata. Montes regionis Mediterraneæ. America borealis et australis.

Præter flores minores specimina nostra typo Europæo videntur omnino conformia.

S. MARITIMA (*Don in Eng. Bot.* tab. 2195; *DC. Pr.* i. 389).

Mar. sept.—In rupibus juxta Cap. Spartel! In litore freti Herculis juxta Ceuta!

Ar. Geog. Europa media et australis in maritimis. Specimina Africana (nostris exceptis) non vidi.

S. APETALA (*L., DC. Pr.* i. 389).

Mar. sept.—Tanger! In monte Beni Hosmar supra Tetuan!

Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia).

S. ciliata (*Fr. Nov. Fl. Suec.* 59; *Rchb. Ic. Fl. Germ.* fig. 4956), = S. patula (*Jord. Obs. Pl. Fr.* p. 23).

Mar. occid.—Casa Blanca!

Forsan prioris var., sed nota diagnostica ex sepalis supra capsulam maturam adpressis, nec patulis cruciformibus, videtur satis constans et cultura immutata. Caracteres cæteri plane variabiles. Haud sine dubio pro subspecie enumeravi.

S. LINNÆI (*Presl, Rel. Hænk.* ii. 14; *Boiss. Fl. Or.* i. 663), = S. saxatilis (*Wimm. Fl. Schles.* 76; *Koch, Syn. Fl. Germ.* 119),=Spergula saginoides (*L., DC. Pr.* i. 394).

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan usque 2500 m.!

Ar. Geog. Montes Europæ fere totius, Asiæ borealis et Americæ borealis. Hucusque in Africa non indicata.

SPERGULA (*L. Gen.* 586).

S. ARVENSIS (*L., DC. Pr.* i. 394).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Ar. Geog. In arvis Europæ fere totius. Hinc inde in regione Mediterranea (inclusa Macaronesia), in India orientali et in Abyssinia.

S. PENTANDRA (*L., DC. Pr.* i. 394).

Mar. merid.—Misra ben Kara haud procul urbe Mogador!

Ar. Geog. In cultis Europæ et regionis Mediterraneæ (inclusa Macaronesia).

Semina videntur omnino diversa ab illis *S. arvensis*; sed non desunt formæ intermediæ, et hæc forsan melius pro subspecie habenda.

SPERGULARIA (*Pers. Syn.* i. 504; *B. et H. f. Gen. Pl.* i. 125).

Arenarias stipuliferas a cæteris Linnæanis Persoon *loc. cit.* primus separavit, et ad genus novum (*Spergularia*) constituendas proposuit. Nomen igitur *Lepigonum* a plurimis receptum, consentientibus Bentham, Hooker, Boissier, rei botanices magistris, prætermisi.

S. MARINA (*All. Fl. Ped.* ii. 114, sub *Arenaria*; *Wahlb. Fl. Gothob.* 47; *et Kindb. Mon. Lepig.* 18, sub *Lepigono*),=Arenaria rubra β. marina (*L. Fl. Suec.* p. 152),=Arenaria marginata (*DC. Fl. Fr.* iv. 793), = Spergularia marginata (*Boiss. Fl. Or.* i. 733),=A. media (*DC. Pr.* i. 401, *non* L.).

Mar. occid.—Casa Blanca! Mogador!

Ar. Geog. Species amphigea per orbem terrarum (exclusis reg. polaribus) in maritimis diffusa, rarius in terris continentalibus subsalsis obvia.

De *L. media* (L. Sp. Pl. 606) conf. Kindberg, loc. cit. Nomen hodie inextricabile delendum.

S. FIMBRIATA (*Boiss. et Reut. Diagn. Pl. Or.* ser. 2, i. 94; *Salzm. Exsicc. MSS.*; *Kindb. Mon. Lepig.* 21, sub *Lepigono*).

—— ——, var. α, TYPICA. Facies *S. macrorhizæ* (Gr. et God. Fl. Fr. i. 276), ramis elongatis sæpissime prostratis, mucrone in foliorum apice ipsorum diametrum æquante vel superante. Semina majore pro parte aptera, cætera margine fimbriata.

Mar. sept.—Tanger in maritimis! (*Boiss. et Reut. loc. cit.*).

Mar. occid.—Casa Blanca!

—— ——, var. β, CONDENSATA. Foliis in ramis brevioribus approximatis, hirtulis, brevissime mucronulatis, floribus numerosis in panicula brevi condensatis, sepalis densius glanduloso-hirsutis, seminibus sæpe (non semper) omnibus apteris, stipulis argenteis maximis.

Mar. occid.—In insula Mogador hanc formam insignem legimus!

—— ——, var. γ, TENUE. Ramis brevioribus tenuibus, erectis vel adscendentibus, foliis sæpius brevioribus mucrone ipsorum diametrum bis terve longiore armatis, seminibus apteris et fimbriato-marginatis commixtis.

Mar. occid.—In arenosis juxta Aïn el Hadjar!

Mar. merid.—In regione inferiore, præsertim versus radices Atlantis Majoris sat frequens. Legimus in prov. Shedma! prope Seksaoua! Milhaïn! et alibi vidimus.

Permultis capsulis scrutatis semina fimbriata nonnulla semper detexi sed in ditione nostra semina aptera certe frequentiora, et in var. β nostra semina fimbriata sat rara. Stipulæ elongatæ nitentes in hac specie insignes. Notæ diagnosticæ in hoc genere parum firmæ, sed hæc inter formas probe distinctas enumeranda videtur.

Ar. Geog. In Hispania Gaditana rara, in territorio Maroccano verisimiliter communis, et in Macaronesia nascitur, nec, quoad sciam, alibi detecta.

SPERGULARIA RUBRA (*L., et DC. Pr.* i. 401, sub *Arenaria*; *Pers. Syn.* i. 504; *Boiss. Fl. Or.* i. 732),=Lepigonum rubrum (*Fries, Fl. Halland.* p. 76; *Kindb. Mon. Lepig.* 40).

Mar. merid.—Prov. Shedma, *J. D. H.*!

Ar. Geog. Europa fere tota (exclusa arctica). Regio Mediterranea omnis (inclusa Macaronesia). Asia temperata.

—— ——, var. PINGUIS (*Fenzl, in Led. Fl. Ross.* ii. 167),=Lepigonum salinum (*Fries, Nov. Fl. Suec. Mant.* iii. 34; *Kindb. Mon. Lep.* 36).

Mar. sept.—In maritimis juxta Ceuta!

Mar. occid.—In maritimis prope Mogador!

Mar. merid.—In prov. Shedma!

—— ——, var. SPERGULOIDES, *nob.*,=Lepigonum sperguloides (*Fisch. et Meyer, Ind. Sem. Hort. Petrop.* 1853, *ex Kindb. Mon. Lep.* 39).

Distinguitur panicula racemosa, pedunculis subaphyllis, seminibus in spec. nostris nigrescentibus nitidis auriculato-excavatis.

Mar. occid.—Legi cum var. priore in maritimis prope Mogador!

Notæ diagnosticæ ab auctoribus, et præsertim a cl. Kindberg in Monographia allatæ, ad species plurimas hujus gregis firmandas, fallaces videntur. Stirpes enim summopere variabiles sunt *Spergulariæ* omnes; et quot species definire credunt auctores, tot formas intermedias natura præbet.

S. DIANDRA (*Guss. Fl. Sic. Pr.* i. 515, sub *Arenaria*; *Boiss. Fl. Or.* i. 733),=Arenaria salsuginea (*Bunge in Led. Fl. Alt.* ii. 163, *Ic.* tab. 409, flores errore lutei),=Spergularia salsuginea (*Fenzl, in Led. Fl. Ross.* ii. 166; *Gren. et God. Fl. Fr.* i. 275),=Lepigonum salsugineum (*Kindb. Mon. Lepig.* 42),=Spergularia patens (*Hochst. in Schimp. Pl. Arab. Exs.* No. 193, *ex Boiss. l. c.*).

Mar. occid.—Casa Blanca!

Mar. merid.—Frequens in saxosis aridis regionis inferioris. Prov. Shedma! Mesfioua! Misra ben Kara!

Ar. Geog. Species Mediterranea, verisimiliter per totam regionem calidiorem diffusa. In Macaronesia nondum detecta. In desertis Asiæ mediæ etiam obvia.

Eodem pacto quo congeneres hæc species etiam ludibunda est. Folia sæpe "obtusiuscula" (*Kindberg*), interdum "mucronata" (*Boiss.*), "glabra" (*Fenzl.*), vel sæpius puberula (*spec. nostra*); sepala occurrunt "margine tenuissime scariosa" (*Kindberg*), vel margine scariosa dorso herbaceo æquilata; stipulæ sæpissime pro genere minimæ, interdum longiores et nitentes. Semina in spec. nostris semper ad calcem diagnosis Boissierianæ "triquetro-obovata, aptera, scabriuscula, margine incrassata," nec margine elevata angustata cristata sicut ea descripsit et delineavit Kindberg *l. c.* Nomen Gussonianum antiquius a Kindberg perperam prætermissum. Flores sunt revera sæpissime, sed non semper, diandri, sed nomen triviale nisi plane erroneum non mutandum. Stirps non semper in locis salsis nascitur, et eodem pacto nomen *S. salsuginea* haud exacte convenit.

POLYCARPON (*L. Gen.* 105).

P. TETRAPHYLLUM (*L.*, sub *Mollugine*; *L. fil. Suppl.*; *DC. Pr.* iii. 376).

Mar. sept.—Pr. Cap. Spartel! Inter Tanger et Tetuan! Juxta Tetuan (1851)!

Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe*).

Mar. merid.—Sat frequens in regione inferiore præsertim ad radices Atlantis Majoris. Legimus in prov. Shedma! Prov. Mtouga ad Aïn Tarsil! In convalle Ourika! In convalle Amsmiz circ. 1400 m.!

Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia). Per orbem terrarum hinc inde cum seminibus allatum.

P. alsinefolium (*Biv. St. Rar. Sic. Man.* iii. 7, sub *Hagea*; *DC. Pr.* iii. 376), var. LEIOSPERMUM, *nob.*

A *P. alsinefolio*, cui simillima, differt insigniter var. nostra seminibus lævibus dorso leviter canaliculatis. A *P. peploidi* differt imprimis radice annua, nec perenni, sepalis acutis, nec obtusis subcucullatis.

Mar. occid.—In rupibus insulæ Mogador! et in maritimis haud procul Mogador! Aïn el Hadjar!

Mar. merid.—In distr. Mesfioua haud procul urbe Mogador! Juxta Amsmiz spec. unicum legit J. D. H.!

Ar. Geog. P. alsinefolium est totius reg. Mediterraneæ (inclusa Macaronesia) civis, procul a litore maris rarius obvium.

Var. nostræ proximum est *P. arabicum* (Boiss. Diagn. Pl. Or. ser. 1,

x. 13). Hoc est etiam *P. tetraphyllo* arcte affine et cum *P. alsinefolio* sicut subspecies enumerandum.

POLYCARPON BIVONÆ (*J. Gay in Duchartre, Rev. Bot.* ii. 572; *Walp. Ann. Bot. Syst.* i. 82), var. HERNIARIOIDES, *nob.*,= P. herniarioides (*Ball in Journ. Bot.* 1873, 301).

Mar. merid.—In convalle Aït Mesan a 2300 m. usque 2500 m.! In monte Djebel Tezah circ. 2400 m. (*J. D. H.*)!

Cel. Cosson certum me fecit stirpem Atlanticam fore nil nisi var. *P. Bivonæ*, Gay, sp. polymorphæ in Europa rarissimæ, sed in Algeria e regione calidiore usque subalpinam late diffusæ. Var. nostra differt ramis brevibus condensatis, cymis paucifloris, laciniis calycinis obtusis apice paululum inflexis. Stamina in spec. ex Aït Mesan 3, in illis ex Djebel Tezah cæterum simillimis 5, semina nimis immatura. Calycis laciniæ prorsus ecarinatæ, exteriores linea tenui dorso notatæ.

P. Bivonæ, monente b. Gay, est ipsissima *Hagea polycarpoides* (Biv. St. Rar. Sic. Man. ii. No. 3) a Candolleo et Bertoloni erronee ad *P. peploides*, DC., relata.

Ar. Geog. Africa boreali-occidentalis. Sicilia. Occurrit etiàm ex cel. Gay, *l. c.*, in insulis Canariensibus.

LŒFLINGIA (*L. Gen.* 52).

L. HISPANICA (*L., DC. Pr.* iii. 380; *Schousb. Gew. Marok.* 12).

Mar. occid.—In arenosis ad ripam fluvii prope Mogador! (*Schsb. l. c.*). Prope Aïn el Hadjar ad radices montis Djebel Hadid!

Ar. Geog. Per regionem Mediterraneam imprimis occidentalem diffusa, sed infrequens; deest in Italia continentali et in Græcia, necnon in Macaronesia, in Oriente rarissime occurrit.

POLYCARPIA (*Lam. Journ. Hist. Nat.* ii. 8, *ex DC. Pr.* i. 371; *Webb, Phyt. Can.* i. 156, nomen emendatum).

P. NIVEA (*Ait. Hort. Kew.* ed. 1, i. 286, et *Willd. Sp. Pl.* i. 1119, sub *Achryranthe*; *Webb, Spic. Gorg.* p. 104),=P. gnaphalodes (*Schousb. Gew. Marok.* 104, sub *Illecebro*; *Poir. Dict. Suppl.* iv. 473; *DC. Pr.* iii. 373),=P. microphylla (*Cav. Anal. Cienc. Nat.* iii. 25),=P. glauca *Chr. Sm. in Tuck.* p. 250, ex *Webb l. c.*),=P. candida (*Webb, Phyt. Can.* i. 158, tab. 21).

Mar. occid.—In arenosis maritimis pr. Mogador! (ubi jam legerant Schousboe et Broussonnet et Balansa).

Nomen triviale *nivea* prioritate gaudet et a b. Webb rite restitutum.

Ar. Geog. Species Canariensis et ins. Cap. Viridis, deest in Madeira, et ultra plagam Mogadorensem in terris continentalibus nondum visa.

PORTULACACEÆ (*Juss. Gen.* 313; *Endl. Gen.* 940, ordo reformata et nomen emendatum).

PORTULACA (*L. Gen.* 602).

P. OLERACEA (*L., DC. Pr.* iii. 353).

Mar. occid.—Saffi! Mogador (*Lowe Cat.*).

Mar. merid.—Seksaoua (*J. D. H.*)! et alibi visa in ruderatis.

Ar. Geog. Planta cosmopolita per regiones temperatas calidiores totius fere orbis diffusa.

MONTIA (*L. Gen.* 101).

M. FONTANA (*L., DC. Pr.* iii. 362).

Mar. merid.—In regione subalpina Atlantis Majoris. Legimus in convalle Aït Mesan vix florentem circ. 2500 m.!

Ar. Geog. Herba per Europam omnem et Asiam temperatam diffusa. Nec in Macaronesia, nec in Algeria indicatur.

TAMARISCINEÆ (*Desv. Diss. Inst. Gall. Lect.* ex *DC. Pr.* iii. 95).

TAMARIX (*L. Gen.* 375).

T. AFRICANA (*Poir. Voy.* ii. 189; *DC. Pr.* iii. 95).

Mar. sept.—Tetuan (*Webb Herb.*)! Inter Tetuan et Ceuta!

Ar. Geog. Regio Mediterranea occidentalis. Deest in Macaronesia.

T. GALLICA (*L., DC. Pr.* iii. 96; *Schousb. Gew. Marok.* 131).

Mar. sept.—Tanger! (*Schousb. spec.*)! Tetuan (*Webb Herb.*)!

Mar. occid.—Mogador! (*Lowe Cat.*).

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

Specimen a nobis prope Tanger lectum, *T. Canariensi* simile, non differt a specie. Proxime affinis *T. Anglica*, Webb, habitat secus litora Atlantica Galliæ occidentalis. In Anglia vix indigena est.

T. speciosa (*Ball in Journ. Bot.* 1873, 301).

Frutex 8–10-pedalis; cortex fusco-purpureus, nitidus; racemi coëtanei in ramis lignosis et in hornotinis subsessiles; bracteæ ovatæ, minus quam in *T. gallica* acutæ; sepala oblongo-rotundata, rarius ovata subacuta; petala cito caduca; flores pentandri; capsula (pro grege) longa, pulchre rosea.

Mar. merid.—Copiose secus torrentem in distr. Mesfioua! ad 600 m. Frutex elegans speciosa, herba viridi, fructu roseo, a *T. Gallica* et *T. Africana* facie valde diversa.

Sicut subspecies hic enumerata, forsan melius cognita pro sp. omnino diversa retinenda.

T. ARTICULATA (*Vahl, Symb.* ii. 48, tab. 32; *DC. Pr.* iii. 96).

Mar. merid.—Vidimus sine fl. vel fr. in planitie haud procul urbe Marocco, ramus sterilis tantum lectus!

Ar. Geog. Regio desertorum; verisimiliter ex Marocco meridionali usque fines Indiæ Orientalis diffusa.

HYPERICINEÆ (*DC. Théor. Elém.* p. 214).

HYPERICUM (*L. Gen.* 902).

H. PERFORATUM (*L., DC. Pr.* i. 549).

Mar. sept.—Tanger (*ex Herb. Schsb. spec.*)! (*Salzm. Exsicc.*)! Tetuan (1851)! Specimen eheu vermibus erosum!

Mar. merid.—Ad radices Atlantis Majoris. Tasseremout! Aït Mesan versus 1250 m.! Amsmiz! Tamarut (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Géog. Europa omnis (exclusa arctica). Regio Mediterranea fere omnis (inclusa Macaronesia). In America boreali videtur spontaneum.

Specimina ex Mar. meridionali habent lacinias calycinas longiores quam in typo Europæo.

H. UNDULATUM (*Schousb. in Willd. Enum.* p. 811), = H. quadrangulum, var. ε (*Choisy in DC. Pr.* i. 548), = H. bæticum (*Boiss. Voy. Esp.* i. 114, tab. 34).

Mar. sept.—Vidi in Herb. Kewensi specimen Tingitanum a Salzmann receptum cui scheda "*H. tetragonum*, var. *acutangulum*," *H. bœtico*, Boiss., satis conforme.

Ar. Geog. Peninsula Iberica. Africa borealis. Madeira. Insul. Azoricæ (*H. decipiens*, Wats.).

Suadente cel. Trevirano (in Hyp. Gen. Animad. p. 9) nomen antiquum Schousbœanum *H. bœtico* restitui, et, donec experientia melius docebit, velut speciem distinctam enumeravi.

H. AUSTRALE (*Ten. Syll. Fl. Neap.* 385; *Gren. et God. Fl. Fr.* i. 315), = H. repens (*Poir. Voy.* ii. 224; *Choisy in DC. Pr.* i. 548, *non L., nec Boiss. Fl. Or.* i. 801).

Mar. sept.—In monte Beni Hosmar supra Tetuan! In monte Djebel Dersa pr. Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea occidentalis (quoad peninsulam Ibericam incertum). Forma affinis in Gallia occidentali.

Quid sit *H. repens*, L., dijudicare non audeo. Suadente viro gravissimo, cel. Boissier, erit idem ac *H. perforatum* δ. *punctatum* (Choisy in DC. Prod.), = *H. alpestre* (Stev. Verz. p. 95), = *H. linarioides* (Bosse in Ott. et Dietr. Gartenzeit. iii. 90). Specimina plurima Orientalia quæ vidi a stirpe Gallica (*H. repens*, DC. Pr.) certe diversa sunt, et propius accedunt *H. hyssopifolio*, Vill. Hæc novissima est species valde polymorpha quacum cel. Boissier (Fl. Or. i. 799) plurimas formas ab ipso olim pro speciebus novis propositas semel conjunxit. Dubium mihi adest an notæ differentiales quibus vir celeb. *H. repens* suum ab *H. hyssopifolio* distinxit stabiles sint: quoad rationem calycis et capsulæ maturæ hæc certe variabilis est. *H. repens* (Sibth. et Sm. Fl. Gr. tab. 775, non L.) est species Cretensis, *H. trichocaulon* (Boiss. & Held. Diagn. Pl. Or. ser. 1, viii. 110). Hoc mihi valde proximum *H. australi*, Ten., videtur, sed sec. auctores in sectione *Millepora*, Spach, collocatur, dum species nostra inter *Tæniocarpia*, Spach, enumeranda est.

Hic notandum est specimina *H. australis* ex Italia meridionali et Sicilia quæ vidi (e. g. spec. ab ipso Tenore in Herb. Gay, hodie Kewensi), et Algeriensia plurima a me scrutata cum spec. Gallicis et Maroccanis haud adamussim convenire. Pluribus notis priora inter *H. australe* et *H. linarifolium* (Vahl, Symb. i. 65), = *H. linearifolium* (DC. Prod. et auct. plurim.) media sunt. Re vera characteres quibus distinguitur species Tenoreana, scil. folia latiora, sepala margine glandulis paucis sessilibus, nec numerosis pedicellatis, prædita, non gravis momenti sunt, et hæc melius ad subspeciem reducenda erit.

HYPERICUM TOMENTOSUM (*L.*, *DC. Pr.* i. 551).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Aïn el Hadjar! Prov. Haha prope Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Prov. Shedma! Mskala! Mtouga!

Ar. Geog. Regio Mediterranea occidentalis ex insulis Sicilia et Melita ad litora Atlantica. Deest in Macaronesia.

H. pubescens (*Boiss. Elench.* 42; *Walp. Rep.* i. 383), = H. suberosum (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schousb. spec. ex Herb.*)! (*Webb Herb.*)! Tetuan prope urbem ed ad ostium fluminis, 1851!

Mar. occid.—Casa Blanca! Mazagan!

Mar. merid.—Sat frequens in regione inferiore. Aïn Beida! Mesfioua! Mzouda! Sektana (*R. et Fr. spec. in Hb. Kew.*)!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

Tam *H. tomentosum* quam *H. pubescens*, quod pro subspecie teneo, in reg. meridionalibus fiunt glabriora et minora.

Specimina typica *H. pubescentis* omnino diversa ab *H. tomentoso* videntur, sed non desunt formæ intermediæ (e. g. spec. prope Alemque in Estremadura Lusitanica a Bar. de Paiva lecta, in Herb. Kew. asservata). Spec. nostra ex Mesfioua etiam subintermedia sunt.

H. COADUNATUM (*Chr. Smith in Buch, Beschr. Canar.* 153; *Webb, Phyt. Canar.* i. 45, tab. 4), var. ATLANTICUM, *nob.*?

Mar. merid.—Nondum florens legimus in convalle Aït Mesan circ. 1700 m. s. m.!

Folia et caulis foliaceus cum spec. Canariensibus adamussim conveniunt, sed spec. nostra nimis incompleta. Cel. Cosson benevole communicavit spec. in monte Djebel Ouensa ab indigeno Ibrahim lecta, cui scheda "*H. atlanticum*, Coss. MSS.," verisimiliter huc etiam referenda. Donec cel. auctor meliora docebit, hoc mihi videtur nimis proximum *H. coadunato*. A sp. Canariensi parum distant *H. Naudinianum* (Coss. et Dur. in Bull. Soc. Bot. Fr. ii. 308) stirps Algeriensis, et *H. caprifolium* (Boiss. El. 41; Voy. Esp. tab. 35) Hispaniæ australis incola; et hæc forsan sicut subspecies vel varietates ad *H. coadunatum* ducenda.

Ar. Geog. Species in insulis Canariensibus; varietas in Atlante Majori; formæ proximæ affines in Algeria et Hispania.

HYPERICUM PERFOLIATUM (*L., Sibth. et Sm. Prod. Fl. Gr.* ii. 116; *Gris. Spicil.* i. 224),=H. ciliatum (*Lam. Dict.* iv. 170; *DC. Pr.* i. 552; *Boiss. Fl. Or.* i. 812),=H. dentatum (*Lois. Fl. Gall.* p. 499; *DC. Pr.* i. 552),=H. montanum (*Desf. Fl. Atl.* ii. 216, *non L., nec aliorum*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (*Webb Herb.*)! Inter Tetuan et Ceuta!

Ar. Geog. Regio Mediterranea fere omnis.

Cel. Grisebach nomen Linnæanum ab auctoribus recentioribus prætermissum vindicavit. Specimen in Herb. Linn. est omnino *H. ciliatum*, Lam.

MALVACEÆ (*R. Br. Cong.* p. 8).

MALOPE (*L. Gen.* 841).

M. MALACOIDES (*L., DC. Pr.* i. 429), var. STIPULACEA,=M. stipulacea (*Cav. Anal. Cienc. Nat.* iii. 74; *DC. Pr.* i. 429).

Mar. sept.—Frequens circa Tanger! Tetuan (1851)!

Mar. occid.—? Mogador sec. Broussonnet in Cav. loc. cit. B. Broussonnet interdum plantas originis diversæ semel miscuisse certe scimus. Hanc speciem legit in ditione Tingitana, ubi frequenter occurrit. Nemo recentiorum eam vidit in vicinitate urbis Mogador.

Ar. Geog. Species per regionem Mediterraneam (exclusa Macaronesia) late diffusa; varietas in Africa boreali-occidentali et in Hispania australi obvia est.

M. TRIFIDA (*Cav. Diss.* ii. 85, tab. 27; *DC. Pr.* i. 429).

Mar. sept.—Tanger (*Schousb. spec.*)! (*Salzm. Exsicc.*)! Tetuan (*Webb Herb.*)!

Ar. Geog. Hispania Bætica et ditio Tingitana.

ALTHÆA (*L. Gen.* 839).

A. HIRSUTA (*L., DC. Pr.* i. 437), var. GRANDIFLORA (*Ball in Journ. Bot.* 1873, 302).

Differt a typo corolla subduplo majore, purpureo-rosea, stipulis longioribus, angustioribus, subcuneatis, nec ut in typo ovatis, foliis magis divisis, laciniis augustioribus, planta tota minus hirsuta.

Mar. merid.—Specimina manca legimus in prov. Mtouga! et Shedma!

Melius explorata forsan sicut species nova distinguenda. In herb. beati J. Gay (nunc Kewensi) adsunt specimina duo prope Monspelium lecta, quibus adjecit in scheda "*Althæa mutica*, Gay MSS. (1824)." In his corolla magna ut in nostra, sed stipulæ et folia omnino *A. hirsutæ*.

Ar. Geog. *A. hirsuta* per Europam mediam et regionem fere omnem Mediterraneam (exclusa Macaronesia) diffusa est.

LAVATERA (*L. Gen.* 842).

L. TRIMESTRIS (*L., DC. Pr.* i. 438).

Mar. sept.—Frequens pr. Tanger! (*Salzm. Exsicc.*)! Tetuan (1851)!

Mar. merid.—Sat frequens ad radices Atlantis Majoris. Mesfioua! Tasseremont! Ourika! Sektana (*R. & Fr. spec. in Herb. Kew.*)!

Ar. Geog. Per regionem Mediterraneam (exclusa Macaronesia) late diffusa; in Algeria rara.

—— ——, var. **MALVÆFORMIS**, *nob.*

Floribus minoribus pallide purpureis, foliis subrotundatis, superioribus vix angulatis. Herba tota longius pilosa.

Mar. merid.—Distr. Reraya versus 1100 m.!

L. OLBIA (*L., DC. Pr.* i. 438).

Mar. sept.—In monte Beni Hosmar pr. Tetuan nondum florentem legimus!

Ex indumento et calycibus fructibusque emarcidis anni præcedentis potius ad typum quam ad var. sequentem referenda.

—— ——, var. **HISPIDA**, = L. hispida (*Desf. Fl. Atl.* ii. 118, tab. 171; *DC. Pr.* i. 438).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In rupibus pr. Cap. Spartel! In montibus Djebel Dersa et Beni Hosmar (*Webb Herb.*)!

Ar. Geog. *L. Olbia*, cum var. *L. hispida*, in umbrosis et rupestribus regionis Mediterraneæ occidentalis habitat, nunquam a mari remota. Deest in Macaronesia. Species proxime affinis (*L. unguiculata*, Desf.) Græciam, Siciliam, Cyprum et Cretam incolit.

L. MARITIMA (*Gouan, Ill.* p. 46, tab. 11; *DC. Pr.* i. 439).

Mar. merid.—Prope Aïn el Hadjar!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

L. CRETICA (*L., DC. Pr.* i. 439), = L. sylvestris (*Brot. Fl. Lus.* ii. 227, *non Cyr.*), = Malva pseudolavatera (*Webb, Phyt. Can.* i. 29), = M. hederæfolia (*Vis. Fl. Dalm.* iii. 205).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (1851)! Inter Tetuan et Ceuta!

Mar. occid.—Casa Blanca! Rabat (*R. et Fr. spec. in Herb. Kew.*)! Mogador! (*Lowe Cat.*; *Balansa*; *Coss. Index*).

Mar. merid.—Pluries visa; legimus prope Amsmiz! et in ruderatis urbis Marocco!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Anglia australi advena. In America australi ex Europa allata.

—— ——, var. ACUTILOBA, *nob.* Differt foliis acute lobatis, lobis sinu acuto vel rectangulo divisis margine serratis, fol. superioribus angustioribus interdum subhastatis, tota planta glabriuscula, et statura paululum minore.

Mar. occid.—Casa Blanca! Mazagan! Prope Mogador!

Nisi vidissem formas intermedias inter spec. ex insula Teneriffa et nostra Maroccana pro subspecie nova hanc varietatem habuerim.

Tam in typo quam in var. nostra segmenta involucri interdum fere ad basin divisa. Species est ambigua, inter *Malvas* et *Lavateras* fere media. Est planta polymorpha aspectu variabilis, sed in sententiam cl. Lowe (Man. Fl. Mad. i. 64) *L. sylvestrem*, Brot., a sp. Linneana distinctam esse convenire nequeo.

MALVA (*L. Gen.* 841).

M. HISPANICA (*L., DC. Pr.* i. 431).

Mar. sept.—Tanger (*Schsb. spec.*)! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Djebel Hadid (*R. et Fr. spec. in H. Kew.*)! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Frequens in regione inferiore et ad radices Atlantis Majoris. Mesfioua! Tasseremout! Ourika! Mtouga! Seksaoua! Mskala!

Ar. Geog. Hispania. Africa boreali-occidentalis.

M. SYLVESTRIS (*L., DC. Pr.* i. 432).

Mar. sept.—Tanger (*Webb Herb.*)!

Mar. merid.—Haud raro in irrigatis reg. inferioris et ad radices Atlantis Majoris. Sheshaoua! Ourika! Amsmiz! Milhaïn! et in convalle Aït Mesan circ. 1300 m.!

Ar. Geog. Europa omnis, exclusa arctica. Sibiria. Regio Mediterranea fere omnis; desideratur in Macaronesia, sed occurrit var. sequens in Madeira.

—— ——, var. MAURITIANA (*Boiss. Fl. Or.* i. 819), = M. mauritiana (*L., DC. Pr.* i. 432; *Lowe, Man. Fl. Mad.* i. 66).

Mar. sept.—Specimen nondum florens legit in monte Beni Hosmar pr. Tetuan J. D. H.! fere certe huc referendum.

M. ROTUNDIFOLIA (*L., DC. Pr.* i. 432), = M. vulgaris (*Fries, Nov. Fl. Suec.* p. 219).

Mar. merid.—In regione media Atlantis Majoris. Legimus in convalle Aït Mesan circ. 1600 m.! et supra Arround circ. 2400 m.!

Ar. Geog. Europa omnis, exclusa arctica. Regio Mediterranea, præsertim orientalis, in montanis.

—— ——, var.? INTERMEDIA, *nob.*

Mar. occid.—Prope Mogador frustula incompleta a locustis erosa legimus! Horum specimen unum est fere exacte *M. rotundifolia*; gaudet petalorum unguibus barbatis, et carpellis lævibus brevissime puberulis. Spec. alterum defloratum habet carpella rugosa, vel superne lævia et infra (sub calyce) rugosa. An foret vera varietas, seu potius lusus *M. parvifloræ* in regione litorali frequentis?

Malva parviflora (*L., DC. Pr.* i. 433).

Mar. occid.—Casa Blanca! Mazagan! Mogador! (*Lowe Cat.*).

Mar. merid.—Frequens in calidioribus subhumidis. Sheshaoua! Mskala! Sektana! In ruderatis urbis Marocco!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

Notæ diagnosticæ quibus *M. rotundifolia,* L., *M. borealis,* Wallm., *M. parviflora,*L.,et*M. microcarpa,* Dsf., discernuntur certe variabiles sunt; *M. parviflora* tamen (cujus var. levis est *M. microcarpa*) pluribus notis facile dignoscitur, et vera subspecies est. De hac specie et sequente confer Lowe (Man. Fl. Mad. i. 65). Vir accuratissimus hanc cum *M. boreali* conjungit, sed verisimiliter ob diversitatem carpellorum, a *M. rotundifolia* omnino diversam judicat. Sed carpella etiam interdum ludunt in hac et in *M. nicæensi,* et nota ex eorum superficie diagnosin securam non præbet.

M. NICÆENSIS (*All. Fl. Ped.* ii. 40; *DC. Pr.* i. 433).

Mar. sept.—Tanger (mense Junio florentem)! Tetuan (1851)!

Mar. merid.—In ruderatis urbis Marocco!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

Specimina Tingitana habent carpella glabrescentia parum rugosa.

LINEÆ (*DC. Théor. Elém.* i. 217).

RADIOLA (*Gm. Syst.* i. 298).

R. LINOIDES (*Gmel. l. c.*; *DC. Pr.* i. 428),=Linum radiola (*L., Schousb. Gew. Marok.* 139).

Mar. sept.—In monte Djebel Kebir prope Tanger (*Schousb. l. c.*).

Ar. Geog. Europa fere tota, imprimis occidentalis. In reg. Mediterranea hinc inde. Deest in Macaronesia.

LINUM (*L. Gen.* 389).

L. GALLICUM (*L., DC. Pr.* i. 423; *Schousb. Gew. Marok.* 136).

Mar. sept.—Tanger (*Schsb. l. c.*).

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Abyssinia.

L. STRICTUM (*L., DC. Pr.* i. 424; *Schousb. Gew. Marok.* 137).

Mar. sept.—Tanger (*Schsb. spec.*)! Tetuan 1851!

Mar. occid.—Casa Blanca! Mazagan! Mogador! Djebel Hadid!

Mar. merid.—Frequens in regione inferiore et ad radices Atlantis Majoris. Mesfioua! Tasseremout! Seksaoua! Ourika (*R. et Fr. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Abyssinia.

Forma corymbulis densis axillaribus (*L. spicatum,* Pers.) est potius lusus quam varietas; fere ubique cum specie simul crescit.

LINUM SETACEUM (*Brot. Phyt. Lus.* fasc. i. No. 21; *DC. Pr.* i. 423), =L. tenuifolium (*Schousb. Gew. Mar.* 135, *non L. nec Lam.*).

Mar. sept.—Tanger (*Salzm. Exsicc.,* sub "*L. bicolor,* Schsb.")! (*Schsb. l. c.*). Tetuan (1851)!

Mar. occid.—Mazagan!

Mar. merid.—Prov. Shedma! Prov. Mtouga!

Ar. Geog. Peninsula Iberica. Marocco.

Valde proximum sequenti, cujus mihi videtur forma minor parviflora, inflorescentia sæpius paniculato-racemosa.

L. TENUE (*Desf. Fl. Atl.* i. 280, tab. 81; *DC. Pr.* i. 423), =L. virgatum (*Schousb. Gew. Mar.* 136), =L. melianthum (*Brot. Fl. Lus.* i. 484)? =L. scabrum (*Kunze in Flora,* 1846, 654), et verisimiliter=L. ramosissimum (*Willk. in Bot. Zeit.* 1847, 240, *non Cl. Gay*).

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*). Aïn el Hadjar! In monte Djebel Hadid! Prov. Haha pr. Mogador! (*Schsb. l. c.*).

Mar. merid.—Frequens in prov. Shedma prope Aïn Oumast! Mskala! et alibi.

Ar. Geog. Africa boreali-occidentalis. Peninsula Iberica.

Species variabilis, quoad staturam et inflorescentiam valde ludibunda. Inflorescentia sæpius paniculato-corymbosa, sed inter specimina eodem loco nata occurrit lusus paniculato-racemosus, floribus secundis, a cl. Kunze pro specie nova (*L. scabrum*) descriptus.

L. CORYMBIFERUM (*Desf. Fl. Atl.* i. 279, tab. 80; *DC. Pr.* i. 424), var. MUNBYANUM (*Boiss. et Reut. Pug.* 24).

Mar. sept.—Tanger! (*Schousb. Herb.* sub "*L. corymbiferum*"), *Coss. spec.*! (*Webb Herb.*)! (*Salzm. Exsicc.* sub "*L. virgatum*")!

Mar. merid.—Sat frequens ad radices Atlantis Majoris, rarius in convallibus interioribus. Legimus in distr. Mesfioua! prope Mzouda! et in convalle Aït Mesan!

Ar. Geog. Africa boreali-occidentalis; forsan etiam in Lusitania—specimen ex collibus herbosis Estremadura (*Welwitsch,* No. 80, *in Herb. Kew.,* sub *L. melianthо,* Brot.) propius huic quam *L. tenui* accedit.

Affinitas inter stirpem nostram et *L. corymbiferum* nimis arcta, et nisi auctoritate celebb. Boissier et Cosson devinctus, vix pro varietate habuerim, dum formæ intermediæ plurimæ adsunt. Quoad notas diagnosticas quibus *L. Munbyanum* a *L. corymbifero* distinguitur, monendum est iconem et descriptionem in 'Fl. Atlantica' parum accuratas esse. In omnibus hujus gregis speciebus margo foliorum cartilaginea sæpius læviuscula vel punctis prominentibus asperula, sed interdum ex denticulis minutis serrulata, denticulis tamen mere cartilagineis et semper antrorsum, *nec retrorsum* versis. Verba igitur cel. Desfontaines, "folia retrorsum aspera," certe erronea, et folia superiora in icone citata vere dentata in vivo nunquam visa. Quoad inflorescentiam hæc in *Linis* omnibus hujus gregis sat variabilis, et differentiæ parvi momenti. Ratio longitudinis stigmatis et staminum potius ex *dimorphismo* quam ex charactere specifico hæret? Inter specimina prope Tanger mense Junio lecta video folia, fere exacte ut in *L. corymbifero* Algeriensi, lanceolata margine serrulata, et calyces nullomodo diversos. *L. corymbiferum*, cujus specimen authenticum in herb. beati Desfontaines accurate scrutavi, differt a *L. Munbyano* foliis latioribus cartilagineo-serrulatis magis confertis, corymbo minus laxo. In *L. Munbyano* a loco classico prope Oran folia multo angustiora margine læviuscula, radix nunquam fit lignosus ut in *L. corymbiferum*. Nostra planta in sepibus et dumetis sæpius obvia, gaudet ramis usque 4–5-pedalibus, et minus dense foliosis. Videtur sæpius bienne, interdum perennans.

Hic notandum est *L. corymbiferum* et *L. tenue* proxime affinia esse, adeo ut illud potius pro subspecie quam pro typo distincto habendum esse videtur. Specimina facile invenies aspectu toto cœlo diversa: sed adsunt permultæ formæ intermediæ; et qui has accurate observaverit facile credet *L. corymbiferum* esse progeniem *L. tenuis* factam biennem et vegetiorem. Hæ species ad sect. *Syllinum*, Gris., petalorum unguibus cohærentibus, referendæ. Vidimus sæpe petala caduca simul cohærentia adeo ut corollam monopetalam simulabant.

LINUM BICOLOR (*Schousb. Mar.* 135; *DC. Pr.* i. 428). Deest in versione operis Schousbœi lingua Germanica edita.

Mar. sept.—Tanger (*Schsb. ex DC. loc. cit.*).

Quid sit nescio. Ex brevi diagnosi in DC. Prod. *l. c.* videtur hybridum *L. setaceo-angustifolium*?

L. ANGUSTIFOLIUM (*Huds. Fl. Angl.* 134; *DC. Pr.* i. 426).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Mzouda!

Ar. Geog. Europa occidentalis. Regio Mediterranea omnis (inclusa Macaronesia).

Hæc species, ut jam monuit cel. Boissier, non est perennis, sed sæpe perennans. In Madeira, teste Lowe, semper annuum est.

L. PERENNE (*L. Sp. Pl.* 397),=L. anglicum (*DC. Pr.* i. 427).

Mar. sept.—? In monte Beni Hosmar supra Tetuan legi specimen unicum nondum florens et ideo omnino incertum!

Ar. Geog. Europa media. In regione Mediterranea rarius occurrit.

L. SUFFRUTICOSUM (*L., DC. Pr.* i. 427).

Mar. sept.—Tanger (*Schousb. Herb. ex Coss. spec.*)!

Ar. Geog. Gallia australis. Peninsula Iberica. Africa borealis.

ZYGOPHYLLEÆ (*R. Br. Gen. Rem.* p. 13).

TRIBULUS (*L. Gen.* 532).

T. TERRESTRIS (*L., DC. Pr.* i. 703).

Mar. occid.—Mazagan! Casa Blanca (*R. et Fr. sp. in Herb. Kew.*)!

Mar. merid.—Prov. Shedma!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Occurrit ad Prom. B. Spei, an introductus?

ZYGOPHYLLUM (*L. Gen.* 530).

Z. FONTANESII (*Webb, Phyt. Can.* i. 17, tab. 1; *Walp. Rep.* i. 496), =Z. Webbianum (*Coss. Bull. Soc. Bot. Fr.* ii. 364, in obs. ad *Z. cornutum*).

Mar. occid.—In rupestribus maritimis prope Saffi!

Ar. Geog. Hucusque nonnisi in Ins. Canariensibus et Cap. Viridis visum.

Beatus Webb hoc a *Zygophyllo albo* Ægyptiaco diversum esse non dubitavit, sed, forsan ex synonymo in Buch. Phys. Beschr. Canar. Ins. citato in errorem ductus, *Z. album*, Desf. Fl. Atl. esse idem ac stirpem Canariensem, et a *Z. albo*, Linn., alienum existimavit. Priori igitur nomen *Fontanesii* imposuit. Cel. Cosson (in Bull. Soc. Bot. Fr. *loc. cit.* et in vol. iii. 705) differentias *Zygophyllorum* hujus gregis accurate definivit. Monente viro perspicaci *Z. album*, Desf., est ipsissimum *Z. album*, L., cujus synonymon est *Z. proliferum*, Forsk. Hoc per regionem Mediterraneam orientalem ex Cilicia et Arabia Petræa usque in regnum Tunetanum diffusum est. Regionem Saharensem incolit *Z. cornutum*, Coss., et in eadem regione, sed verisimiliter rarius, occurrit *Z. Geslini*, Coss. Hoc novissimum *Z. albo* proxime affine est, forsan sicut subspecies enumerandum. Nostram stirpem occidentalem, nonnisi in litore Atlantico obviam, Desfontaines non cognovit; unde nomen triviale *Fontanesii* in *Webbianum* mutari voluit cel. Cosson. Error tamen auctoris ad scientiam falsificandam non aptus, et permultæ species nomine botanicorum ipsis alienorum decorantur, quamobrem nomen *Fontanesii* non mutavi.

FAGONIA (*L. Gen.* 531).

F. CRETICA (*L. DC. Pr.* i. 704).

Mar. sept.—Tetuan (*Webb Herb.*)!

Mar. occid.—Saffi! In monte Djebel Hadid haud procul Mogador!

Mar. merid.—Sat frequens in planitie, et rarior in regione inferiore Atlantis Majoris. Prov. Haha! Prov. Shedma! Prov. Mzouda! In convalle Aït Mesan usque 1300 m.! Seksaoua!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). In Oriente nonnisi in insulis Creta et Cypro detecta.

In spec. pr. Seksaoua lectis capsulæ sunt tota superficie glandulosohirtulæ et folia aliquid minora, quibus notis ad *F. sinaicam*, Boiss., accedit; petala tamen, capsulæ et semina sunt omnino *F. creticæ*.

GERANIACEÆ (*DC. Fl. Fr.* iv. 83).

GERANIUM (*L. Gen.* 832).

G. MALVÆFLORUM (*Boiss. et Reut. Pug.* 27; *Walp. Ann.* iv. 395), = G. tuberosum, var. debile (*Ball, in Journ. Bot.* 1873, 302).

Rhizoma horizontale crassum (ex tuberibus concatenatis) caules erectos edens; folia radicalia petiolo longo retrorsum vel patenter piloso suffulta, cum caulinis inferioribus ambitu pentagona, 5–7-partita, segmentis pinnatipartitis, laciniis oblongo-linearibus integris vel parce et obtuse dentatis, superiora breviter petiolata, segmentis angustioribus, omnia utrinque adpresse pilosa, subtus glaucescentia, nervis prominentibus; petioli cum caule ex pilis longioribus brevioribusque intermixtis hirti; sepala eis *G. tuberosi* subduplo majora, oblongo-ovalia, adpresse hirsuta, margine villosa, apice abrupte mucronata, mucrone cito marcescente; petala magna sepalis triplo longiora, profunde emarginata, sinu obtuso, purpureo-lilacina, venis saturatioribus picta; rostrum hirtum in stylo attenuatum. Fructum maturum nondum vidi.

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan supra Arround circ. 2300 m., et in monte Djebel Tezah usque 2600 m. nondum florens legimus.

Ar. Geog. *G. tuberosum* per regionem Mediterraneam omnem (exclusa Macaronesia) diffusum est. *G. malvæflorum* nascitur in Africa boreali-occidentali et in Hispania Granatensi.

Ex radice a clar. G. Maw in hortum suum allata specimina pulchra florentia mihi benevole misit, et ipse viva vidi. In his rhizoma fere cylindricum incrassatum, caules pedales et ultra, flores eos *Malvæ sylvestris* æmulantes. Ex descriptione (loco citato) planta a Boissier et Reuter prope Tlemsen lecta nostræ fere exacte conformis. Specimina quæ habui a Jamin (No. 139), prope Alger lecta, videntur multo propiora *G. tuberoso*, et ejus meram varietatem sistunt. Plantam nostram esse progenies *G. tuberosi* non dubito, sed notæ diagnosticæ satis graves ut pro subspecie habeatur.

G. PYRENAICUM (*L., DC. Pr.* i. 643).

Mar. merid.—In regione media et inferiore Atlantis Majoris. In convalle Aït Mesan 1500–1800 m.! In convalle Amsmiz 1400–1800 m.! Prope Sektana (*R. et Fr. in Herb. Kew.*)!

Ar. Geog. Europa omnis, exclusa arctica, rarius in regione Mediterranea. Oriens. Deest in Macaronesia.

G. MOLLE (*L., DC. Pr.* i. 643).

Mar. sept.—Tanger! Cap. Spartel!

Mar. merid.—Mskala! In convalle Aït Mesan supra Arround circ. 2200 m.!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea tota (inclusa Macaronesia).

GERANIUM ROTUNDIFOLIUM (*L., DC. Pr.* i. 643).

Mar. sept.—Cap. Spartel! Tetuan (1851)! In monte Beni Hosmar supra Tetuan!

Mar. occid.—Casa Blanca! Aïn el Hadjar haud procul Mogador!

Mar. merid.—Frequens in regione inferiore et in reg. media Atlantis Majoris. Mesfioua! Tasseremout, *J. D. H.*! Amsmiz! In convalle Aït Mesan 1300–1500 m.! In monte Djebel Tezah usque 1900 m., *J. D. H.*!

Ar. Geog. Europa fere omnis (exclusa arctica). Regio Mediterranea omnis (inclusa Macaronesia). Asia temperata.

—— ——, var. FOLIIS PALMATIPARTITIS, *nob.*

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Folia profundius divisa, segmentis oblongis obtusis.

G. DISSECTUM (*L., DC. Pr.* i. 643).

Mar. merid.—Sheshaoua! Sektana! Amsmiz!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea (inclusa Macaronesia). Asia temperata.

G. LUCIDUM (*L., DC. Pr.* i. 644).

Mar. sept. —In monte Beni Hosmar supra Tetuan!

Mar. merid.—In regione inferiore et subalpina Atlantis Majoris. In convalle Ourika circ. 1400 m.! In convalle Aït Mesan circ. 2200 m.! In monte Djebel Tezah ad 2000 m.!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea (inclusa Macaronesia). Siberia Uralensis.

G. ROBERTIANUM (*L., DC. Pr.* i. 644).

Mar. sept.—Tanger! In rupibus calcareis pr. Tetuan!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea fere omnis (inclusa Macaronesia). Siberia Altaica. In America boreali advena?

—— —— β, PURPUREUM (*DC. Prod. l. c.*),=G. purpureum (*Vill. Dauph.* iii. 174).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Ourika! In convalle Aït Mesan 1300–1400 m.!

Ar. Geog. Regio Mediterranea (inclusa Macaronesia). Sæpe occurrit in convallibus calidioribus Alpium Europæ. Est forma australis *G. Robertian* per reg. Mediterraneam cum specie obvia.

ERODIUM (*L'Hérit. in Ait. Hort. Kew.* ed. 1, ii. 414).

E. PETRÆUM (*Willd. Sp. Pl.* iii. 625; *DC. Pr.* i. 645), var.=E. cheilanthifolium, *Boiss. El.*?

Mar. sept.—? In monte Beni Hosmar supra Tetuan, nondum florens et ideo incertum!

Ar. Geog. Hispania. Gallia australis. Ditio Tetuanensis?

Monente cel. Boissier in 'Flora Orientali' (i. 887) hoc ab *E. trichomanefolio,* L'Hér., differt pube cinerea non glandulosa, foliis ambitu ovato-oblongis nec oblongo-lanceolatis, et petalis superioribus maculatis. Specimina nostra rhizomate et foliis exemplaribus Hispanicis *E. cheilanthifolii* sat congrua, sed segmenta foliorum magis acuta. Characteres *Erodiorum* hujus gregis non bene definiti sunt, et forsan plurimæ species auctorum in unam reducendæ.

E. ATLANTICUM (*Coss. in Bull. Soc. Bot. Fr.* xx. 244).

Descriptionem cl. auct. proferre juvat:—

"Planta *perennis,* caudice crasso sæpius pluricipite, cæspitosa, e speciminibus pluribus suppetentibus *acaulis,* pedunculos radicales plures emittens. *Folia* omnia radicalia rosulata, *mollia, dense pubescenti-subtomentosa,* ambitu ovata vel ovato-oblonga, basi cordata, longe petiolata, *lobata vel lobulata lobis obtusis* inæqualiter crenulato-dentatis. Stipulæ latæ ovatæ. *Pedunculi radicales* foliis vix vel subdimidio longiores, pubescentes *pilis longis patentibus* permixtis pilis brevissimis glandulosis, 4–7-*flori,* pedicellis elongatis. Involucri bracteolæ membranaceæ, ovato-suborbiculatæ, pubescenti-villosæ, pedicellis multoties breviores. Flores majusculi. *Sepala* longe pilosa, *oblonga abrupte mucronata mucrone subulato* (sepalorum mucronibus alabastra coronantibus), exteriora æqualiter 5-nervia. *Petala pallide purpurascentia* venis picta, calyce subduplo longiora, ungue intus barbato, *subinæqualia,* superiora late obovata latiora, inferiora paulo longiora obovato-subcuneiformia. *Staminum fertilium filamenta* in parte inferiore membranaceo-dilatata, *edentula,* superne subulata, sterilium subdimidio breviora membranacea, lanceolata, inferne dorso pubescentia. Fructus rostrum 25–30 millim. longum, *carpellis* oblongis inferne attenuatis, pilis patulis hispidis, processu rostrali interne setis rigidulis sensim decrescentibus et superne evanidis donato, *foveolis* apicalibus *latis suborbiculatis, sub foveola plica destitutis.*"

Mar. merid.—In monte Djebel Orguis supra Imintenout legit Balansa anno 1867! In monte supra Seksaoua circ. 1300 m.! In rupibus prope Milhain!

Monente cel. Cosson, "*E. Atlanticum* juxta *E. Boissieri,* Coss. in herb. (*E. asplenioides,* Boiss. Voy. Esp. 123, non Willd.; Boiss. Exsicc. Hisp.; Bourgeau, Pl. Esp. n. 1100; Pedro del Campo ed. Bourgeau, 1852,

n. 20, excl. syn. *Geranium asplenioides,* Desf. Atl. ii. 109, t. 168), quod sepalis mucronatis quoque gaudet, collocandum, sed distinctum foliis mollibus lobatis lobulatisve, non trisectis, pubescentia pedunculorum longiore, fructus rostro subdimidio breviore, carpellis minoribus. Habitu *E. montanum,* Coss. et DR. (in Bull. Soc. Bot. iii. 737), refert, sed differt foliis omnibus radicalibus minus profunde lobatis, sepalis abrupte mucronatis, non muticis, petalis subinæqualibus."

ERODIUM CICUTARIUM (*L.,* sub *Geranio; L'Hérit. in Ait. Hort. Kew.* ed. 1, ii. 414; *DC. Pr.* i. 646).

Mar. sept.—Tanger versus Cap. Spartel! Tetuan (1851)! In monte Beni Hosmar!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea (inclusa Macaronesia). Asia media. In temperatis totius orbis introductum.

Species polymorpha mire modo ab auctoribus, et imprimis a b. Delile (Ind. Sem. Hort. Monspel. 1838), vexata; lusus enim fere innumeri, et limites vix aut ne vix definiendi. Viri graviores qui de lana caprina certare nolunt, et pro speciebus distinctis notas diagnosticas stabiliores quæsierunt, parum feliciter desudarunt. Natura invita a vinculis definitionum effugit. Ut sileam de forma et indumento foliorum, de colore et magnitudine petalorum, radix variat tenuis aut crassa, sæpissime annua, sed interdum perennans; carpella gaudent rostro breviore vel longiore, glabro vel scabro; immo cotyledones ludunt cordatæ integræ vel trilobæ vel quinquelobæ. Ut morem gererem rei Botanices magistris formas eximias Maroccanas (attamen inter se ægre definiendas) hic enumeravi.

—— ——, var. γ, *DC. Pr. l. c.,*=Geranium chærophyllum (*Cav. Diss.* iv. 226, tab. 95. fig. 1),=Erodium cicutarium (*Willd. Sp. Pl.* iii. 629, non aliorum),=E. Salzmanni, *Del. loc. cit.,*=E. viscosum (*Salzm. Exsicc.* 1823). Et vix distinguendum *E. scandicinum,* Del. *loc. cit.*

Mar. sept.—Prope Tanger sat frequens! (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca!

—— ——, var. MACULATUM,=E. maculatum (*Salzm. Exsicc.*), et verisimiliter=E. atomarium (*Del. loc. cit.*).

Mar. sept.—Prope Tanger sat frequens! (*Salzm. Exsicc.*)! Cap. Spartel!

—— ——, var. BIPINNATUM,=Geranium bipinnatum (*Cav. Diss.* iv. 273, tab. 126),=G. numidicum (*Poir. Voy.* ii. 201),=G. æthiopicum (*Lam. Dict.* ii. 655, errore quoad nomen specificum; conf. *Poir. l. c.*).

Mar. occid.—In arenosis pr. Mogador! Aïn el Hadjar! Prov. Haha pr. Mogador! Mazagan!

Mar. merid.—Frequens in saxosis regionis inferioris. Mskala! Seksaoua! Mtouga!

Hæc est forma solennis regionis calidioris. Distinguitur statura minore, foliis sæpius bipinnatifidis laciniis linearibus obtusiusculis glabris vel puberulis, pedunculis sæpissime, præsertim in maritimis, bifloris, interdum 3–6-floris, rostro carpellorum tenui elongato glabriusculo vel scabro, petalis minoribus subæqualibus colore saturatiore. Specimen unicum prope Mazagan lectum, a cæteris valde diversum, videtur esse lusus ex solo uberiore natus.

Erodium Jacquinianum (*Fisch. et Mey. Ind. Sem. H. Petrop.* ix. *Suppl.* p. 11; *Boiss. Fl. Or.* i. 890), = E. staphylinum (*Bert. Fl. It.* vii. 185), = E. tenuisectum (*Gren. et God. Fl. Fr.* i. 311).

Facie valde proximum *E. cicutario*, var. *bipinnato*, quocum Bertoloni, loc. cit., conjunxit, sed dignoscitur carpellorum foveolis plica destitutis et cotyledonibus pinnatifidis. Specimina nostra tamen accurate scrutata incertum me fecerunt. In *E. cicutario* typico foveola carpellorum subtus plica concentrica prædita est. In varietatibus meridionalibus, et præsertim in var. *bipinnato*, plica externa minus profunda et interdum subobsoleta. In *E. Jacquiniano* plica omnino obsoleta. Non desunt tamen exemplaria incertæ sedis, et inter specimina ex regione montana (Aït Mesan) adest exemplar carpellis fere exacte *E. cicutarii*, scil. plica manifesta sub foveola notatis.

Mar. occid.—Prope Mogador! et præsertim in Insula!

Mar. merid.—In convalle Aït Mesan a 1400 m. usque 2400 m.!

Ar. Geog. Occurrit sparsim in regione Mediterranea calidiore (exclusa Macaronesia).

Specimina ex regione montana ostendunt foliorum lacinias latiores, et aspectu *E. cicutario* typico propius accedunt.

E. ROMANUM (*L.*, sub *Geranio*; *Willd. Sp. Pl.* iii. 630; *DC. Pr.* i. 647)?

Mar. sept.—In monte Djebel Dersa prope Tetuan (*Webb Herb.*)!

Specimina nondum fructifera mihi incerta. Pedunculi 6–10-flori. An foret *E. cicutarii*, var. *maculati* lusus in statu juniore?

Ar. Geog. *E. romanum* in Gallia australi et Italia frequens, fit rarius in Græcia et in Oriente. Deest in peninsula Iberica, et in Macaronesia.

E. MOSCHATUM (*L.*, sub *Geranio*; *Willd. Sp. Pl.* iii. 361; *DC. Pr.* i. 647).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Cap. Spartel! visum prope Tetuan!

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Mar. merid.—In ruderatis urbis Marocco!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Europa occidentalis ex Hibernia usque fretum Herculis. Abyssinia. In America australi advena.

—— ——, var. DISSECTUM, foliorum segmentis pinnatifidis lobis dissectis.
Mar. merid.—In prov. Shedma!

ERODIUM CICONIUM (*L.*, sub *Geranio*; *Willd. Sp. Pl.* iii. 629; *DC. Pr.* i. 646).
Mar. occid.—Casa Blanca!
Mar. merid.—Prov. Shedma prope Aïn Oumast! Mtouga! Seksaoua!
Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

E. BOTRYS (*Cavan. Diss.* iv. tab. 90. fig. 2; *Bert. Amœn. Ital.* 35; *DC. Pr.* i. 647).
Mar. sept.—Tanger!
Ar. Geog. Regio Mediterranea occidentalis ex Italia usque Macaronesiam. Ager Byzantinus, nec alibi in Oriente.

E. LACINIATUM (*Cavan. Diss.* iv. 228, tab. 113. fig. 3, sub *Geranio*; *Willd. Sp. Pl.* iii. 633; *DC. Pr.* i. 646).
Mar. occid.—Mogador! In regione litorea prov. Haha (mense Aprili)! Aïn el Hadjar (mense Junio)!
Ar. Geog. Regio Mediterranea calidior (inclusa Macaronesia).
E. pulverulentum (*Cavan. l. c.* tab. 125. f. 1) est lusus hujus speciei quoad formam foliorum et indumentum valde ludibundæ. Specimina mense Aprili lecta omnia pulverulenta. Quæ legimus ineunte Junio post imbres mensis præcedentis ostendunt folia ex ramis novellis enata viridia, vix puberula. Radix interdum perennans. Folia interdum eis *E. botryis* simillima. Carpellorum foveola semper plica destituta.

E. MALACOIDES (*L.*, sub *Geranio*; *Willd. Sp. Pl.* iii. 639; *DC. Pr.* i. 648).
Mar. sept.—Tanger (*Webb Herb.*)! Inter Tanger et Tetuan! Prope Tetuan visum!
Mar. occid.—Mogador (*Lowe Cat.*).
Mar. merid.—Occurrit passim in regione inferiore et ad radices Atlantis Majoris. Prov. Shedma pluribus locis! In ruderatis urbis Marocco! Mesfioua! Reraya! In convalle Aït Mesan circ. 1300 m.! Amsmiz! Seksaoua! Mtouga!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Gallia occidentalis.

E. CHIUM (*L.*, sub *Geranio*; *Willd. Sp. Pl.* iii. 634; *DC. Pr.* i. 647).
Mar. sept.—Tanger! Cap. Spartel! Tetuan!
Ar. Geog. Regio Mediterranea, imprimis occidentalis (inclusa Macaronesia). Deest in Asia Mediterranea. Formæ arcte affines in Ægypto et in Palæstina.

E. litoreum (*Léman, in DC. Fl. Fr.* iv. 843, *et Prod.* i. 648).
Mar. sept.—Inter Tanger et Tetuan!

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Mar. merid.—In prov. Shedma prope Castellum Gubernatoris!

Ar. Geog. Gallia australis. Hispania. Africa boreali-occidentalis.

Hoc pro subspecie præcedentis enumeravi. Distinguitur foliis profundius divisis lobis angustioribus. Nota diagnostica ex filamentis staminum sterilium *ciliatis* ut fertur in *E. chio*, *glabris* in *E. malacoidi* et *E. litoreo*, mihi plane instabilis videtur. In fructu nullum discrimen detegere potui.

Erodium glaucophyllum (*L., Sp. Pl.* 952, *et Cavan. Diss.* iv. 221, tab. 92. fig. 2, sub *Geranio*; *Ait Hort. Kew.* ed. 1, ii. 416; *DC. Pr.* i. 648).

Mar. merid.—In planitie saxosa aridissima inter Sheshaoua et Aïn Oumast legit cl. G. Maw!

Ar. Geog. Regio desertorum ex Arabia et Mesopotamia per Ægyptum et Algeriam usque planitiem Maroccanam.

In icone Cavanillesii citata et in plurimis speciminibus a nobis visis folia subintegra crenata. Specimina Maroccana referunt plantam vegetiorem subbipedalem foliis majoribus longioribus, sæpius subtrilobis donatam. Carpella apice plica duplici cincta.

E. guttatum (*Desf. Fl. Atl.* ii. 113, tab. 169, sub *Geranio*; *Willd. Sp. Pl.* iii. 636; *DC. Pr.* i. 648).

Mar. merid.—Prov. Shedma, in saxosis aridis pr. Aïn Oumast! Seksaoua! In convalle Aït Mesan in reg. inferiore Atlantis Majoris circ. 1200 m., *G. Maw spec.*!

Ar. Geog. Africa borealis. Hispania Granatensis.

Facie priori subsimile, sed plurimis notis probe distinctum. Carpella non vere foveolata, in spec. Maroccanis undique favosa et setis rigidis fulvis obsita. In spec. Algeriensibus carpella video plus minusve rugosa et setas pauciores.

Oxalis (*L. Gen.* 582).

O. corniculata (*L., DC. Pr.* i. 692).

Mar. sept.—Inter Tanger et Tetuan! Tetuan (1851)!

Mar. merid.—In ruderatis urbis Marocco! In convalle Aït Mesan circ. 1800 m., *J. D. H.*!

Ar. Geog. Herba amphigea per Europam mediam, regionem omnem Mediterraneam, necnon per Indiam orientalem et Americam borealem calidiorem late diffusa.

In territorio Maroccano admodum rara.

O. sericea (*L. fil, Suppl.*; *DC. Pr.* i. 695), var. pilosa, *nob.*=O. cernua (*Thunb. Diss. Ox.* tab. 2. fig. 2),=O. libyca (*Viv. Fl. Lib. spec.*).

Mar. sept.—In vicinitate urbis Tanger, certe advena, hodie facta spontanea! Occurrit sæpissime flore pleno.

Ar. Geog. In Africa australi orta per regionem Mediterraneam plurimis locis diffusa, scil. in insul. Canariensibus, Madeira, Corsica, Zacyntho, pr. Smyrnam, in agro Tingitano, et alibi in Africa boreali.

Oxalis sericea, L. fil., *O. cernua*, Thunb., et *O. compressa*, Jacquin, sunt stirpes Capenses arcte affines. Prima dignoscitur indumento brevissimo, herba subglabra, stylis abbreviatis; secunda indumento sericeo-piloso, stylis longitudine intermediis; tertia indumento sericeo-piloso stylis elongatis. Qui seriem formarum scrutabit facile has in unam speciem conjungendas fatebitur. Characteres quibus *O. libyca* distinguitur omnino fallaces. Bulbilli e collo radicis orti non desunt (etsi rari) in speciminibus Capensibus. Calli versus apicem sepalorum non semper adsunt in exemplaribus Mediterraneis, nec semper desunt in spec. Capensibus.

RUTACEÆ (*Juss. Gen.* 296).

RUTA (*L. Gen.* 523).

R. MONTANA (*Clus. Hist.* ii. 136; *Vill. Dauph.* iii. 582; *DC. Pr.* i. 710),=R. tenuifolia (*Desf. Fl. Atl.* i. 836).

Mar. occid.—Prope Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Ad radices Atlantis Majoris, Ourika! Seksaoua! Tassgittelt (*R. & Fr. spec. in Herb. Kew.*)! et in planitie; prov. Shedma!

Ar. Geog. Regio Mediterranea fere omnis, exclusa Macaronesia.

R. CHALEPENSIS (*L. Mant.* i. 69), var. *a*,=R. angustifolia (*Pers. Syn.* i. 404; *DC. Pr.* i. 710).

Mar. sept.—Prope Tetuan in rupibus! et in monte Beni Hosmar! ubi eam olim legit P. B. Webb.

Mar. merid.—In regione media Atlantis Majoris a 1600 m. usque 2400 m.! In rupibus Seksaoua! Aït Mesan!

Ar. Geog. Regio Mediterranea, imprimis occidentalis. Deest in Oriente (*Boiss. Fl. Or.* i. 922) et in Macaronesia.

—— ——, var. *β*, BRACTEOSA (*Boiss. loc. cit.*),=R. bracteosa (*DC. Pr.* i. 710).

Mar. sept.—Prope Tanger in monte Djebel Kebir, *J. D. H.*! Inter Tetuan et Ceuta!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Non desunt formæ inter has varietates mediæ. Spec. nostrum ex Seksaoua sub var. *a* enumeratum forsan melius sisteret var. *intermediam.*

HAPLOPHYLLUM (*A. Juss. Mem. Mus.* xvi. 464).

H. BROUSSONNETIANUM (*Coss. in Bull. Soc. Bot. Fr.* xx. 244).

Descript. in verbis cel. auctoris huc refero.

"Radix simplex vel parce ramosa, descendens, indurato-perennans. Caules subsolitarii vel plures, erecti, simplices vel superne parce ramosi, inferne glabrescentes, superne vix pubescentes et sparsim verruculoso-glandulosi. *Folia* subcoriacea, conferta, glabriuscula, *omnia indivisa,* oblongo-obovata, inferne attenuata, obtusa, viridia, subtus pallidiora, punctato-glandulosa. *Inflorescentia* pluriflora cymoso-corymbiformis, *laxiuscula* ramis patulis. Calyx deciduus, minutus. 5 partitus, lobis ovatis obtusiusculis, dorso et præsertim ad marginem pubescentibus. Petala (ex alabastro deprompta) flava, ovato-suborbiculata, glandulis minimis sparsis punctulata, obsolete trinervia. Filamenta libera, in alabastro ultra medium complanato-liguliformia. *Ovarium* in disco brevissimo annulari supra partem connatam carpidiorum expanso insidens, e carpellis tot quot sepala efformatum, glabrum, haud verrucosum, vix glanduloso-punctatum, *carpellis* 4-*ovulatis.* Stylus filiformis, carpellorum partem liberam longe excedens. *Capsula* campanulato-subglobosa, lævis, *carpellis* superne liberis, *in parte libera divergentibus, acuminato-rostratis rostro* brevi *arcuato-patente,* introrsum dehiscentibus. Semina (immatura tantum nota) compressa, reniformia, reticulato-rugosa."

Mar. occid.?—" Mogador" (*Broussonnet in Herb. Bouchet, ex Cosson, l. c.*).

Mar. merid.—Ad radices Atlantis Majoris ad Keira legit fructiferum mense Majo 1867 Balansa.

Monente cel. auctore, " *H. Broussonnetianum* carpellis 4-ovulatis, dehiscentibus, rostro eglanduloso terminatis, foliis indivisis, filamentis liberis juxta *H. pumilum,* Boiss. (Diagn. Or. ser. 1, i. 61, et Fl. Or. i. 928), collocandum, sed ab illo et cæteris speciebus affinibus distinctissimum carpellis divergentibus acuminato-rostratis rostro patente."

Certum me feci b. Broussonnet plantas nonnullas e terris interioribus habuisse, et cum exemplaribus in agro Mogadorensi lectis semel commiscuisse. Locus natalis *H. Broussonnetiani* Mogadorensis a botanicis posterioribus non verificatus mihi valde incertus videtur.

PEGANUM (*L. Gen.* 601).

P. HARMALA (*L., DC. Pr.* i. 712).

Mar. occid.—Prope Mogador! (*Lowe Cat.*).

Mar. merid.—Frequens in regione inferiore præsertim in planitie arida. Prov. Shedma! visum in vicinitate urbis Marocco! in prov. Mtouga! et alibi.

Ar. Geog. Regio Mediterranea fere omnis, deest tamen in Italia continentali, in Gallia australi et in Macaronesia; deinde ex Hungaria per Rossiam meridionalem in Asiam mediam diffusum.

Herba, ut videtur, locustis invisa. Post transitum insectorum voracium inter cæteras stirpes a foliis prorsus denudatas, hanc solam illæsam pluries vidimus.

CELASTRINEÆ (*R. Br. Gen. Rem.* 22).

CELASTRUS (*L. Gen.* 270).

C. SENEGALENSIS (*Lam. Dict.* i. 661; *DC. Pr.* ii. 8), var. EUROPÆUS, =C. europæus (*Boiss. El.* 46; *Walp. Rep.* i. 533),=Catha europæa (*Boiss. Voy.* 127, tab. 33).

Mar. occid.—In monte Djebel Hadid haud procul Mogador!

Mar. merid.—Ad radices Atlantis Majoris prope Tasseremout! Ourika!

Ar. Geog. Species per regiones tropicales orbis veteris, ex India orientali usque oras Atlanticas Africæ æquatorialis late diffusa. Inde, ut videtur, per territorium Maroccanum Hispaniam australem attingit.

Cl. Oliver, in Flor. Trop. Africa, identitatem hujus et plurimarum specierum ab auctoribus descriptis cum *C. senegalensi*, Lam., primus indicavit; species valde ludibunda est, sed habitus semper fere idem.

RHAMNEÆ (*R. Br. Gen. Rem.* 22).

ZIZYPHUS (*Juss. Gen.* 380).

Z. LOTUS (*L.*, sub *Rhamno*; *Lam. Dict.* iii. 316; *DC. Pr.* ii. 19; *Schousb. Gew. Marok.* 87).

Mar. occid.—In prov. Haha haud procul Mogador! sed in reg. litorali non obvius.

Mar. merid.—In saxosis incultis reg. inferioris fere ubique. Legimus pluries in prov. Shedma! prope urbem Marocco! et alibi!

Ar. Geog. Africa borealis. In Europa australi calidiore (Græcia, Sicilia, peninsula Iberica) rarius occurrit. In Arabia australi ad Mare Rubrum (*Schweinfurth*).

In incultis aridissimis, ubi vix ulla alia planta arborea, nutrimentum sibi consequitur, et dum incolarum incuria vitam concedit, fit arbor 20-pedalis, trunco crasso, diametro bipedali et ultro.

RHAMNUS (*L. Gen.* 265).

R. ALATERNUS (*L., DC. Pr.* ii. 23; *Schousb. Gew. Marok.* 87).

Mar. sept.—In monte Djebel Kebir pr. Tanger! (*Schsb. l. c.*).

Mar. occid.—Prope Mogador (*Lowe Cat.*).

Mar. merid.—Frequens in regione inferiore Atlantis Majoris. Legimus in convalle Ourika! in convalle Amsmiz! Aït Mesan circa 1400 m.! In monte Djebel Tezah 1600 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

R. OLEOIDES (*L., DC. Pr.* ii. 24; *Schousb. Gew. Marok.* 87).

Mar. sept.—Tanger (*Webb Herb.*)! Prope Cap. Spartel! In rupibus calcareis juxta Tetuan! In monte Beni Hosmar! (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea a Græcia usque peninsulam Ibericam et Imperium Maroccanum. Deest in Oriente et in Macaronesia.

—— ——, var. ANGUSTIFOLIA (*Lange, MSS. in Herb. Kew.*). Differt a typo habitu toto, ramis longioribus minus divaricatis, foliis longioribus. Cum spec. Hispanico a cl. Lange misso omnino convenit.

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Ourika! Distr. Reraya circa 1200 m.!

Ar. Geog. Forma Hispanica et Maroccana.

—— ——, var. AMYGDALINUS, = B. amygdalinus (*Desf. Fl. Atl.* i. 198; *DC. Pr.* i. 25).

Differt foliis crassioribus, coriaceis, subtus non reticulatis, floribus binis in quovis fasciculo.

Mar. occid.—In monte Djebel Hadid! et in collibus prov. Haha haud procul Mogador!

Facie sp. Canariensi (*R. integrifolio*, DC.) haud absimilis.

Hanc formam nonnisi ex Africa boreali vidi.

RHAMNUS LYCIOIDES (*L., DC. Pr.* ii. 25).

Mar. merid.—Ad radices Atlantis Majoris. In convalle Amsmiz circ. 1300 m.! Seksaoua!

Ar. Geog. Hispania. Africa boreali-occidentalis.

AMPELIDEÆ (*Humb., Bonpl. et Kth. Nov. Gen.* v. 223).

VITIS (*L. Gen.* 284).

V. VINIFERA (*L., DC. Pr.* i. 633).

Hodie ab incolis parce et rarius culta, verisimiliter olim a Romanis ubique in Mauritania introducta. Ad radices Atlantis Majoris pluribus locis, e. g. prope Amsmiz! et Gurguri! videtur spontanea in dumetis et saxosis.

Ar. Geog. Ex Asia occidentali orta, per regionem Mediterraneam diu culta, et sæpissime subspontanea facta est.

SAPINDACEÆ (*Juss., B. et H. Gen. Pl.* i. 389).

Subordo ACERINEÆ (*B. et H. l. c.* 391).

ACER (*L. Gen.* 1155).

A. MONSPESSULANUM (*L., DC. Pr.* i. 594).

Mar. merid.—In regione media Atlantis Majoris, in convalle Aït Mesan a 1600 m. usque 1800 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). Ramis occurrit in calidioribus Europæ mediæ.

Spec. nostra flore et fructu carent, sed folia et rami omnino conformes.

ANACARDIACEÆ (*Lindl. Introd.* ed. ii. 166).

PISTACIA (*L. Gen.* 1108).

P. ATLANTICA (*Desf. Fl. Atl.* ii. 364; *DC. Pr.* ii. 64).

Mar. merid.—(*Schousb. in Herb.*) *Coss. Index.* Vidimus sat frequentem in regione inferiore; sæpius fit arbuscula 12–18-pedalis, sed in locis humidis juxta fontes, ubi verisimiliter culta, fit arbor grandis; e. g. ad Aïn Beida, trunci diametro 2–3-pedali!

Pistaciæ e grege *P. Terebinthi*, L., extricatu difficiles, et forsan melius cognitæ plurimæ ad varietates reducendæ. *P. atlantica* genuina est Africæ borealis indigena civis. Planta Græca (monente cel. Boissier) ad *P. muticam*, F. M., referenda est.

PISTACIA LENTISCUS (*L., DC. Pr.* ii. 65).

Mar. sept.—Frequens in maritimis. In monte Djebel Kebir prope Tanger! Prope Tetuan! et versus Ceuta! pluribus locis visa.

Mar. occid.—Mogador (*Lowe Cat.*). In monte Djebel Hadid!

Mar. merid.—Ad radices Atlantis Majoris et in convallibus calidioribus. Prope Ourika! Aït Mesan usque 1600 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

RHUS (*L. Gen.* 369).

R. OXYACANTHA (*Cavan. Anal. Cienc. Nat.* iii. 36), = R. oxyacanthoides (*Dum. Cours Bot. Cult.* vi. 662), = R. dioica (*Brouss. in Willd. Enum.* 325; *DC. Pr.* ii. 71).

Mar. occid.—In agro Mogadorensi (*Broussonnet, ex DC. et Willd. l. c.*). In monte Djebel Hadid fructiferam legimus ineunte Junio!

Specimina nostra ad formam typicam foliis viridibus trifidis, foliolorum dentibus obtusis, cortice fusco, referenda.

—— ——, var. foliolis omnibus profunde et acute dentatis.

Mar. merid.—Specimen unicum prope Seksaoua legit J. D. H.!

—— ——, var. ZIZYPHINA, = R. zizyphina (*Tin. Pl. Rar. Gen. Sic. Pug.* p. 8).

Mar. occid.—Prope Agadir (*Coll. Indig.* 1871)!

—— ——, var. ALBIDA, = R. albida (*Schousb. Gew. Mar.* 128; *DC. Pr.* ii. 70), = R. oxyacantha (*Schousb. in Act. Soc. Hafn.*; *DC. Pr.* ii. 71, *non Cav.*), = R. cratægiformis (*Pers. Syn.* i. 362).

Mar. occid.—Prope Mogador in arenosis! (*Lowe*, sub *R. oxyacantha*, spec. in herb. Kew. nostro conforme)!

Ar. Geog. Africa boreali-occidentalis. Varietates in Sicilia et in Oriente occurrunt.

R. oxyacantha est species summopere variabilis, per regionem Mediterraneam calidiorem late dispersa, nullibi frequens. In Europa nonnisi in Sicilia; in Macaronesia in sola insula Teneriffa detecta. Monente ipso Schousboe *loc. cit.* var. *albida* nostra, quæ primo aspectu valde diversa foliolis leviter crenatis, subintegerrimis, canis, cortice albido. ramis inermibus, culta in Horto Hafniensi "exuit canitiem et tomentum, foliaque evaserunt glabra et magis crenata quam in planta spontanea."

RHUS PENTAPHYLLA (*Desf. Fl. Atl.* i. 267, tab. 67; *DC. Pr.* ii. 72).

Mar. occid.—Prope Mogador (*R. et Fr. in herb. Kew.*)!

Mar. merid.—In regione inferiore haud infrequens. Prov. Shedma! Mzouda! Prope Keira, *J. D. H.*! Seksaoua!

Ar. Geog. Africa borealis. Sicilia.

CORIARIÆ (*DC. Prod.* i. 739).

CORIARIA (*L. Gen.* 458).

C. MYRTIFOLIA (*L., DC. Pr.* 739).

Mar. sept.—Tanger! (*Schsb.*) *Coss. Index.*

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia). Græciæ dubia civis, forsan errore indicata?

LEGUMINOSÆ (*Juss. Gen.* 345).

ANAGYRIS (*L. Gen.* 509).

A. FŒTIDA (*L., DC. Pr.* ii. 99).

Mar. occid.—Prope Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in regione inferiore. Prov. Shedma! Aïn Tarsil! Prov. Haha! Ad ruinas urbis Tasagkimat (*Schousb. Herb.*) *Coss. spec.*!

—— ——, var. seu lusus foliolis latioribus.

Mar. merid.—Specimen unicum sine flore vel fructu legit G. Maw pr. Tasseremout, fere media inter typum et *A. latifoliam* (Brouss. in Willd. Enum. 489) stirpem Canariensem quæ mihi ad varietatem reducenda videtur.

Ar. Geog. Regio Mediterranea calidior. Forma arcte affinis in Macaronesia.

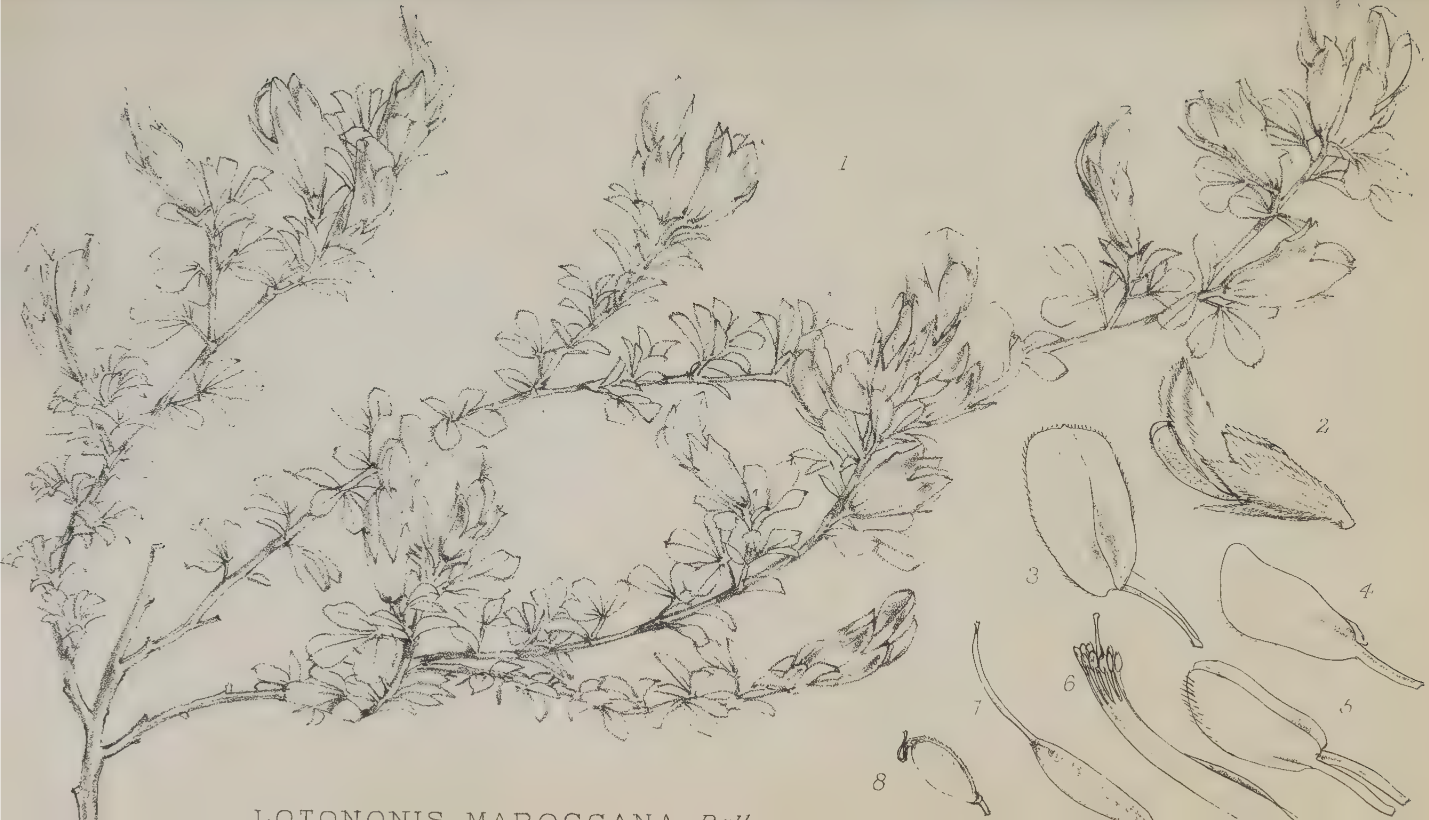
LOTONONIS (*Eckl. et Zeyh. Enum.* p. 179; *DC.* sub *Ononide*).

L. MAROCCANA (*Ball, in Journ. Bot.* 1873, 302). (Plate XV.)

Planta perennis, ramosa, prostrata; herba tota sericea; folia petiolata, trifoliolata; foliola obovata, apiculata, basi cuneata, brevissime stipitata; stipulæ 1–2 foliolatæ; flores sæpissime solitarii, brevissime pedicellati; calyx demum campanulatus, purpurascens, basi striis validis notatus; vexillum alas longiuscule superans, extus cum carina insigniter sericeum; legumina latiuscula, glabra, 8–10-ovulata.

Mar. merid.—In regione inferiore Atlantis Majoris prope Tasseremout! Ourika! Aït Mesan! Amsmiz! a 1000 m. ad 1400 m.

Species probe distincta, a *L. lupinifolia*, Boiss. (sub *Leobordea*), differt imprimis foliis tri- nec quinquefoliolatis; a *L. cytisoide* toto habitu et florum structura recedit; in hac nempe vexillum carinæ subæquale, in nostra carinam et alas longe superat.



LOTONONIS MAROCCANA, *Ball.*

LUPINUS (*L. Gen.* 865).

L. HIRSUTUS (*L., DC. Pr.* ii. 407).

Mar. sept.—Tanger! (*Webb Herb.*)! Inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

L. PILOSUS (*L., DC. Pr.* ii. 407).

Mar. merid.—In glareosis torrentis Ourika! Amsmiz!

Ar. Geog. Oriens. Africa borealis. Deest in Europa austro-occidentali. (conf. *Boissier, Fl. Or.* ii. 27). Species arcte affinis (*L. varius*, L.) in peninsula Iberica.

L. pilosus ad subspeciem *L. varii* reducendus videtur, dum notæ diagnosticæ parum stabiles. Legumina in spec. nostris 3–4-sperma, semina minute asperula non scabrida.

L. ANGUSTIFOLIUS (*L., DC. Pr.* ii. 407).

Mar. sept.—Tanger! (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea omnis. In Madeira obvius, sed in Ins. Canariensibus non indicatus.

Pedicelli non vere ebracteolati ut fertur, bracteolæ enim semper adsunt ad squamas membranaceas cito marcescentes reductæ. *L. linifolius*, Roth, dignoscitur floribus minoribus bracteolatis, calycis labio inferiore subtrifido, nec ut in *L. angustifolio* integro, et insuper seminibus multo minoribus globulosis maturitate badiis umbrino et flavo variegatis, nec maculis albidis vel flavis variegatis. Cel. Boissier tamen (in Fl. Or. ii. 29) *L. angustifolio* calycis labium inferius sub-2–3-denticulatum, semina grisea maculis albis lineisque irregularibus fulvis marmorata, tribuit; dum *L. linifolium*, Roth, pro synonymo *L. reticulati*, Desv., habet. In hac specie (sec. Boissier *l. c.*) labium calycis inferius subintegrum, semina ovato-globosa albida nigro-reticulata, maculis saturatioribus nigro-punctulatis obsita. Grenier et Godron (Fl. Fr. i. 366) tres species Europæas hujus gregis adesse suspicantur, et *L. linifolium* (Roth et Guss. Fl. Sic. ii. 269) a *L. reticulato*, Desv., differre credunt seminibus badiis vix nigro-maculatis. In spec. nostris vix florentibus characteres a seminibus latent. Labium calycis inferius superiore multo longius basi utrinque denticulo parvo auctum est. *Lupini* plerique cum seminibus cerealibus per regionem Mediterraneam dispersi, soli et cœli vicissitudini obnoxii, valde variabiles sunt, et characteres stabiles difficillime detegendi.

L. LUTEUS (*L., DC. Pr.* ii. 407).

Mar. sept.—Prope Tanger et in monte Djebel Kebir! (*Webb Herb.*)! Inter Tetuan et Ceuta!

Ar. Geog. Peninsula Iberica. Italia. Africa borealis. In Madeira advena.

ARGYROLOBIUM (*Eckl. et Zeyh. Enum.* 184).

A. LINNÆANUM (*Walp. in Linnæa*, xiii. 506),=Cytisus argenteus (*L.*, *DC. Prod.* ii. 156).

Mar. sept.—In rupibus calcareis pr. Tetuan! In monte Djebel Dersa pr. Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

—— ——, var. FALLAX,=A. fallax (*Ball, in Journ. Bot.* 1873, 302).

Stirpem hanc pro subspecie *A. Linnæani* loc. cit. enumeravi; hodie mihi videtur melius ad varietatem reducenda. Differt a typo floribus minoribus, foliorum foliolis latioribus obtusioribus, et præsertim calycis labio inferiore inæqualiter trifido, lacinia media lateralibus multo angustiore, nec subæquali, fere ut in *A. calycino*, M. B. (sub *Cytiso*). Semina in quovis legumine 6–10, sæpissime 8.

Mar. merid.—Legimus in convalle Aït Mesan sat frequens a 1400 m. ad 1600 m. Specimen unicum legi supra Arround circ. 2100 m.

A. stipulaceum (*Ball, in Journ. Bot.* 1873, 302).

Fruticulus nanus, suberectus, ramosus; folia primaria longe petiolata; flores brevissime pedicellati, solitarii seu geminati in vertice ramulorum; stipulæ et bracteolæ ad basin calycis majores et latiores quam in *A. Linnæano*, cito marcescentes; calyx basi laxus, labii inferioris laciniis anguste lanceolatis subæqualibus, labio superiore paullo longioribus; legumen subtorulosum, 5–6-spermum; semina flava.

Mar. merid.—In regione inferiore Atlantis Majoris. Prope Seksaoua! et verisimiliter huc referenda spec. nimis incompleta prope Tasseremout et in convalle Amsmiz lecta!

Forsan pro specie omnino distincta vindicanda erit, sed characteres citati in hoc genere instabiles videntur.

A. MICROPHYLLUM (*Ball, in Journ. Bot.* 1873, 303).

Perenne, 3–6-pollicare; herba tota pube brevi rigida incana; pedunculi uniflori, axillares et terminales, folia parva breviter petiolata superantes; stipulæ minimæ; calyx coloratus, ad basin usque bisectus, labio superiore profunde bifido, inferiore ad quartam partem tridentato, dente medio subulato lateralibus lanceolatis quidquam breviore; flores parvi, calycem parum excedentes, bicolores (vexillo fulvo, carina citrina); legumen 4–5-spermum.

Mar. merid.—In regione inferiore Atlantis Majoris. Supra Seksaoua circa 1100 m.!

Argyrolobio nullo, nisi forte *A. unifloro*, Dcne. (sub *Cytiso*), comparandum; sed ab hoc eximie differt calycis structura et floribus duplo majoribus.

ADENOCARPUS (*DC. Fl. Fr. Suppl.* 549).

A. TELONENSIS (*Lois. Fl. Gall.* ed. i. 446, sub *Cytiso*; *Rob. Cat. Toulon*, 24; *Boiss. Voy. Esp.* 418, tab. 43; *DC. Fl. Suppl.* 550, ex parte),

=A. grandiflorus (*Boiss. Bibl. Gen.* 1836; *Gren. et God. Fl. Fr.* i. 363).

Mar. sept.—In saxosis calcareis supra Tetuan!

Ar. Geog. Gallia Mediterranea. Hispania. Ditio Tetuanensis.

Ill. A. P. De Candolle hanc speciem cum *A. commutato,* Guss., commiscuit; sed nomen triviale *telonensis,* a Loiseleur jam primum propositum, non ideo mutandum. Nomen *grandiflorus* infaustum, dum flores non raro minores quam in *A. divaricato,* L'Hér. Cel. Boissier (Fl. Or. ii. 34) optimo consilio sub *A. divaricato,* L'Hér., formas plurimas nulla nota stabili distinguendas conjunxit. Nomen Lamarckianum *parvifolius* recentius est et omnino ineptum, dum folia magnitudine variabilia.

ADENOCARPUS ANAGYRIFOLIUS (*Coss. in Balansa, Pl. Maroc.* 1867, *et in Bull. Soc. Bot. Fr.* xx. 240).

Sequitur descriptio Cossoniana:—

"*Frutex* elatus, ramosus, dumosus, *glaber*, ramis divergentibus vix striato-angulatis cortice pallide virente. *Folia* Anagyrim fœtidam referentia, in genere *ampla*, longe petiolata, trifoliolata, *glabra, foliolis nitidulis* oblongis *vix complicatis,* mucronulatis, nervo medio subtus prominente. Stipulæ citissime deciduæ, in speciminibus suppetentibus evanidæ. *Racemi* caulem et ramos terminantes, *laxiusculi,* demum elongati, rachi puberulo-sericea demum glabra, *pedicellis* erecto-patulis calyce paulo longioribus *bibracteolatis bracteolis citissime deciduis. Calyx puberulo-sericeus, eglandulosus,* campanulato-obconicus bilabiatus, *labio* superiore bipartito lobis ovato-triangularibus, *inferiore apice tridentato dentibus brevibus* lanceolato-linearibus subæqualibus vel medio paulo longiore. Corolla lutea, vexillo ascendente obovato-suborbiculato extus pubescenti-sericeo, alis carinaque subæquilongis glabris. Ovarium lineare, glandulis subpedicellatis obsitum. Stylus filiformi-subulatus basi crassior, supra basim abrupte arcuato-refractus. Stigma minutum, terminale, capitellato-depressum. Legumen 3–4 centim. longum, pedicello multoties longius, lineari-oblongum, plano-compressum, subtorulosum, glandulis fuscescentibus subpedicellatis obsitum."

Mar. merid.—Satis frequens in convallibus Atlantis Majoris, unde in planitiem in glareosis torrentium descendit. Balansa hanc stirpem insignem primus detexit in glariosis Oued Ghagaia. Legimus in convalle Aït Mesan a 1400 m. usque 1800 m.! In convalle Amsmiz! prope Ourika! et prope pagum Amsmiz! Ex montibus Djebel Ouensa et Djebel Afougueur attulit indigenus Ibrahim et specimina mihi benev. comm. cel. Cosson.

Ab *A. divaricato,* L'Hér., insigniter differt foliis glabris nitidulis, pro genere amplis, *Anagyrim fœtidam* referentibus, dentibus labii calycini inferioris brevioribus, et præsertim racemis elongatis (4–8-pollicaribus) ramis strictis erectis, vix striato-angulatis, glabris.

CALYCOTOME (*Link in Schrad. Journ.* ii. pars 2, p. 50).

C. VILLOSA (*Poir. Voy.* ii. 207, sub *Spartio*; *Link. loc. cit.*), = Spartium lanigerum (*Desf. Fl. Atl.* ii. 135), = Cytisus lanigerus (*DC. Pr.* ii. 154).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Prope Tetuan!

Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia).

—— ——, var. INTERMEDIA, *nob.*, = C. intermedia (*Salzm. Exsicc.* sub *Cytiso*; *Presl, Bot. Bemerk.* 51; *Walp. Ann.* i. 223).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Versus Cap. Spartel! Inter Tanger et Tetuan! In monte Beni Hosmar pr. Tetuan (*Webb Herb.*)!

Nimis vicina præcedenti, vix sicut subspecies enumeranda.

GENISTA (*L. Gen.* 859; *Benth. et H. fil. Gen. Pl.* i. 482).

G. MONOSPERMA (*Lam. Dict.* ii. 616; *DC. Pr.* ii. 150; *Boiss. Voy. Esp.* p. 144, sub *Retama*), var. CLUSII, *nob.*, = Spartium Clusii (*Spach, Ann. Sc. Nat.* ser. 2, xix. 290, tab. 16. fig. 3), = S. Webbii (*Spach, loc. cit.* fig. 4).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*).

Mar. merid.—Frequens in regione inferiore, sed fugit loca arida saxosa. Legimus in prov. Shedma! Prope Keira! Reraya (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. BOVEI, = Spartium Bovei (*Spach, loc. cit.* 297). Forma grandiflora.

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Ar. Geog. *G. monosperma* Africam borealem et peninsulam Ibericam incolit, et proxime affinis est *G. Rœtam* (Forsk. Fl. Æg.-Arab. 214) species orientalis in Ægypto-Syria et Arabia obvia.

Notæ quibus plurimæ s. d. species hujus sectionis distinguuntur mihi videntur nimis incertæ et variabiles.

G. DASYCARPA (*Coss. in Ind. Pl. Maroc.* sub *Retama*, sin. descript.), = Genista, sp. nov.! *nobis, MSS. in herb.*

Mar. merid.—Copiose crescit in convalle Aït Mesan usque 1700 m. s. m.!

Nuper cel. Cosson spec. florifera et frùctifera in Atlante Majore ab indigeno Ibrahim lecta nobis benevole communicavit. Descriptionem viri optimi mox prodituram prævenire nolui

Legimus etiam in convalle Amsmiz spec. nondum florentia, speciem novam ab affinibus valde diversam sistentia!

G. TRICUSPIDATA (*Desf. Fl. Atl.* ii. 138, tab. 183; *DC. Pr.* ii. 148).

Mar. merid.—Seksaoua! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa boreali-occidentalis.

GENISTA TRIDENS (*Cavan. Anal. Cienc. Nat.* iv. 59; *DC. Pr.* ii. 148), = G. gibraltarica (*Lowe Cat. non DC.*).

Mar. sept.—? Tanger (*Broussonnet, ex Cavan. l. c.*).

Mar. occid.—Legimus in monte Djebel Hadid haud procul Mogador! Vidi specimen prope Mogador a b. Lowe lectum sub *G. gibraltarica* in herb. Kew.!

Mar. merid.—Satis frequens ad radices Atlantis Majoris. Mesfioua! Tasseremout! Ourika!

Cel. Cosson certum me fecit plantam a nobis in provinciis meridionalibus lectam ad *G. tridentem*, Cav., referre deberi. Floribus remotis in racemis laxis dispositis ab affinibus statim dignoscitur. De loco natali prope Tanger indicato valde dubito. Broussonnet nimis facile plantas originis diversæ semel commiscuit, et specimen ex provinciis meridionalibus forsan Cavanillesio misit.

Stirps Imperii Maroccani propria.

G. GIBRALTARICA (*DC. Pr.* ii. 148).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. spec. comm. Cosson*)!

Ar. Geog. Hucusque nonnisi in utroque litore Freti Herculis detecta.

G. juniperina (*Spach, Ann. Sc. Nat.* ser. 3, ii. 275; *Walp. Rep.* v. 478).

Mar. sept.—In rupibus prope Tetuan (1851)! In monte Djebel Dersa supra Tetuan (*Webb Herb.*)!

G. juniperina stirps tantum in locis indicatis cognita, *G. gibraltaricæ* proxima, gaudet habitu proprio, sed notæ diagnosticæ non gravis momenti, et hæc potius ad subspeciem reducenda mihi videtur.

G. TRIACANTHOS (*Brot. Fl. Lus.* ii. 89, *Phyt. Lus.* tab. 54; *DC. Pr.* ii. 147), var. GALIOIDES (*Spach loc. cit.*)

Mar. sept.—In monte Djebel Kebir prope Tanger admodum frequens et ludibunda! Tanger! (*Webb Herb.* in scheda, *G. triacanthos*, var. *galioides* manu cel. Spach addita)! (*Salzm. Exsicc.*)!

Ar. Geog. Peninsula Iberica. Mauritania Tingitana.

In collibus supra Algeciras legi specimina a Tingitanis non distinguenda.

G. FEROX (*Desf. Fl. Atl.* ii. 136, tab. 182, sub *Spartio*; *Poir. Dict. Suppl.* ii. 708; *DC. Pr.* ii. 147), var. MICROPHYLLA, *nob.*

Speciminibus Algeriensibus conformis nisi foliolis multo minoribus pro longitudine latioribus.

Mar. occid.—In monte Djebel Hadid haud procul Mogador!

Mar. merid.—In prov. Shedma!

Ar. Geog. Africa borealis.

Specimina fructifera tantum vidimus. Planta ulterius inquirenda.

G. MYRIANTHA (*Ball, in Journ. Bot.* 1873, 303).

Frutex 4–6-pedalis, ramosissimus; herba tota subglaberrima; ramulorum hornotinorum debilium folia sessilia, anguste lanceolata, annotinorum obovato-oblonga, omnia parvula, 1-foliolata, carnosula, obtusa vel interdum mucronulata; stipulæ minutissimæ bidenticulatæ; flores numerosissimi versus apicem ramulorum conferti; bracteolæ 2 marcescentes in quovis pedunculo; calycis dentes superiores triangulares tubo lævi subæquilongi, tres inferiores æquales, omnes apice ciliolati; carina vexillo æqualis, concolor, pallide flava; alæ saturatæ luteæ. Legumen non vidimus.

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Amsmiz circa 1300 m.!

A *G. scorpio*, DC., differt habitu, glabritie, floribus bicoloribus, calycis tubo lævi nec striato. Facie proprior *G. lucidæ*, Camb., sed in hac carina vexillum valde superat, calyx profundius fissus.

GENISTA FLORIDA (*L.*, *DC. Pr.* ii. 151), var. MAROCCANA, *nob.*

Differt a typo pubescentia sericea copiosiore, foliis minoribus angustioribusque, floribus minoribus et calyce pro magnit. corollæ minore Frutex erectus, 4–8-pedalis.

Mar. merid.—In regione inferiore Atlantis Majoris. Legimus in glareosis convallis Ourika, et iterum in convalle Amsmiz a 1000 m. ad 1500 m.!

Hanc stirpem pro subspecie *G. floridæ* olim habui, sed characteres citati tantum varietatem sistunt.

Notæ diagnosticæ quibus distinguuntur *G. polygalæfolia*, DC. Prod., et *G. leptoclada*, J. Gay, mihi videntur nimis variabiles. His etiam addenda est velut subspecies *G. floridæ*, *G. oretana*, Webb. *G. florida* est imprimis peninsulæ Ibericæ civis.

G. PSEUDOPILOSA (*Coss. Not. Pl. Mid. Esp.* p. 102; *Walp. Ann.* iii. 847)?

Mar. merid.—Ex distr. Reraya ad radices Atlantis Majoris specimen unicum florens attulerunt cl. Rein et Fritsch! Vidi in herb. Kew.; sed ob defectum fructus species incerta manet.

Ar. Geog. Hispania. Algeria.

G. CLAVATA (*Poir. Dict. Suppl.* ii. 717; *Spach, Ann. Sc. Nat.* ser. 3, iii. 144; *DC. Pr.* ii. 146).

Species valde ludibunda cujus varietates quatuor enumeravit cl. Spach, *loc. cit.* Hæ omnes in ditione Tingitana obviæ, sed limitibus certis vix definiendæ.

—— ——, var. α, = Spartium capitatum (*Cav. Anal. Cienc. Nat.* 1801, IV. p. 63; *Schousb. in Herb.*), = Genista umbellata, var. β. capitata (*DC. Pr.* ii. 147).

Mar. sept.—Tanger (*Schsb. spec.*)! (*Salzm. Exsicc.* sub *Spartio capitato*)!

Mar. occid.—In agro Mogadorensi (ex *DC. Pr. l. c.*). Adest in herb.

Kew. spec. ex herb. Gouan cum scheda MS. Broussonnet "ex Mauritania."

—— ——, var. β. WEBBIANA (*Spach, l. c.*; *Walp. Rep.* v. 499).
Mar. sept.—Tanger (*Webb Herb.*)! Inter Tanger et Tetuan!

—— ——, var. γ. GOUDOTIANA (*Spach, l. c.*; *Walp. l. c.*).
Mar. sept.—"Crescit prope Tingidem," ex *Spach, l. c.*

—— ——, var. δ. CASUARINOIDES (*Spach, l. c.*; *Walp. l. c.*).
Mar. sept.—Prope Tanger (*Webb Herb.*)! El Araisch (*R. & Fr. spec. in herb. Kew.*)!

Ar. Geog. Species in Imperio Maroccano et peninsula Iberica australiore obvia.

Spartium molle (Cav. Anal. Cienc. Nat. 1801, iv. 57), = *G. mollis* (DC. Pr. ii. 146), ex agro Mogadorensi a Broussonnet allatum, est verisimiliter forma quædam *G. clavatæ*. Specimina Mogadorensia non vidi, nec vidit cel. Cosson.

Genistæ specimen nondum florentem et omnino incertum legit in convalle Aït Mesan celeb. J. D. Hooker. Planta tota subglaberrima; rami erecti stricti parce foliati; folia simplicia, exstipulata, lineari-lanceolata, juniora retrorsa, ex pulvinula inconspicua orta. Planta ulterius inquirenda.

ULEX (*L. Gen.* 881).

U. BÆTICUS (*Boiss. El.* p. 30; *Webb, Ot. Hisp.* p. 39; *Walp. Rep.* i. 626), var. CONGESTUS, *nob.*, = U. scaber (*Kunze in Flora*, 1846, 696), var. δ. congesta (*Webb, Ot. Hisp.* p. 40, tab. 32 B).
Mar. sept.—In monte Beni Hosmar pr. Tetuan! eodem fere loco ubi olim legerat *P. B. Webb.*

Ar. Geog. Hispania australis. Africa boreali-occidentalis.

Characteres quibus *U. Bourgæanus*, Webb, et *U. scaber*, Kunze, ab *U. bætico* separantur mihi videntur omnes variabiles, et eodem pacto *Ulices* fere omnes hujus gregis locis diversis exortos pro sp. diversis haberes. Nomen triviale *scaber* haud aptum. *Ulices* omnes affines plus minusve pubescentes vidi, non vero scabros.

U. africanus (*Webb, Ot. Hisp.* p. 38, tab. 29; *Walp. Ann.* iv. 464), var. DELESTREI, *Webb, l. c.*
Mar. sept.—Prope Djemma el Ghazaouat ad fines Mauritaniæ Tingitanæ (*Delestre, Webb, loc. cit.*).

Ar. Geog. Algeria boreali-occidentalis.

Stirps mihi tantum ex descript. et icone Webbiana cognita. *U. bætico* valde proxima, et non sine dubio pro subspecie enumerata.

U. BOIVINI (*Webb, It. Hisp.* p. 51; *Walp. Rep.* i. 626), var. SALZMANNI, *nob.*, = Nepa Salzmanni (*Webb, Ot. Hisp.* p. 31, tab. 26; *Walp. Ann.*

iv. 468),=Ulex genistoides (*Lindl. Bot. Reg.* tab. 1452; *Salzm. Exsicc. pro parte, non Brot. nec Clem.*).

Mar. sept.—In monte Djebel Kebir pr. Tanger mense Junio florentem legi! Tanger (*Salzm. Exsicc.* sub *U. genistoidi*)!

—— ——, var. MEGALORITES, *nob.*,=Nepa megalorites (*Webb, Ot. Hisp.* p. 30, tab. 25; *Walp. Ann.* iv. 467),=U. genistoides (*Salzm. Exsicc. pro parte*).

Mar. sept.—Tanger (*Schousb. spec.*)! eandem formam nondum florentem legi mense April in monte Djebel Kebir! Specimina nullomodo a typo Webbiano diversa legi mense Junio florentia in collibus prope S. Roque haud procul Gibraltar!

Ar. Geog. Africa Tingitana. Hispania.

Qui descriptiones et icones Webbianas sub oculis tenet species tres hic semel conjunctas omnino diversas esse judicavit. Notæ diagnosticæ evidentes non desunt; sed qui plantas in vivo accurate scrutabit sententiam facile mutabit. Dentes calycini, bracteolæ et petala omnia variabilia sunt, et vix invenies plantas locis diversis enatas omnino conformes. *N. Salzmanni* Webb est inter *U. Boivini* et *M. megaloritem* pluribus notis media. Salzmann certe varietates nostras semel confudit, et ambo in herbariis sub *U. genistoide* suo obviæ sunt.

CYTISUS (*L. Gen.* 877; *Benth. et H. fil. Gen. Pl.* i. 484).

C. BÆTICUS (*Webb, It. Hisp.* 52: *Ot. Hisp.* p. 45, tab. 40; *Walp. Rep.* i. 627, sub *Sarothamno*; *Steud. Nomencl.*),=Sarothamnus Gaditanus (*Boiss. et Reut. Diagn. Pl. His.* No. 15; *Walp. Rep.* i. 628),=S. arboreus (*Boiss. Voy. Esp.* 400, *non Desf. sub* Spartio).

Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)! In collibus inter Tanger et Tetuan!

Mar. occid.—Mogador (*Lowe Cat.*, sub *C. arboreo*, Desf.)?

Ar. Geog. Hispania australis. Africa boreali-occidentalis.

—— ——, var. MACRANTHUS, *nob.*

Mar. sept.—In clivo septentrionali montis Djebel Kebir legi florentem mense Aprili!

Arbuscula speciosa 10-pedalis et ultra, floribus duplo majoribus longius pedicellatis, foliorum petiolis longioribus insignis, sed aliis notis non a typo diversa.

C. ARBOREUS (*Desf. Fl. Atl.* ii. 131, tab. 177, sub *Spartio*; *DC. Pr.* ii. 154),=Sarothamnus arboreus, *Webb, non Boiss. Voy.*

Mar. merid.—Prope Tasseremout fructiferum legimus ineunte Majo!

Specimina nostra foliis et ramis apice denudatis typo Algeriensi simillima sed legumina aliquantulum diversa, illis *C. arborei* et *C. scoparii*, Lk., fere intermedia—juniora pilosa pilis subpatentibus, demum glabrescentia, breviora quam in *C. scopario*. In nostris legumina utrinque æqualiter dehiscentia; in *C. scopario* vidi semper suturam superiorem serius et difficile dehiscentem.

Ar. Geog. Africa borealis.

C. scoparius, var. *glabratus* (Link in Buch, Beschr. Ins. Can. p. 156) in insula Teneriffa a Chr. Smith lectus et a recentioribus non detectus, est forsan forma *C. arborei*, ut suspicatus est cl. Lowe (Man. Fl. Mad. 123).

CYTISUS BALANSÆ (*Boiss. Diagn. Pl. Or.* ser. 2, ii. 7, sub *Sarothamno*), var. ATLANTICUS (*Ball, in Journ. Bot.* 1873, 303).

Flores solitarii, axillares in ramis hornotinisi nermibus, vel rarius in ramis annotinis glabris striatis pungentibus paucifoliatis; pedunculi bracteolati ad basin foliolis 2–3 obverse lanceolatis, obtusis, sericeis, ex pulvinula incrassata ortis, fulcrati; calyx parce pilosus campanulatus vix bilabiatus, labio superiore vix emarginato, inferiore brevissimo dentibus 3 subobsoletis; corolla glaberrima; vexillum carinam incurvo-falcatam et alas paulo superans; stylus apice non incrassatus, magis quam in affinibus (*C. purgante* et *C. Hænseleri*) exsertus.

Mar. merid.—In regione superiore Atlantis Majoris. Aït Mesan! usque in juga Tagherot! Djebel Tezah! a 2200 m. ad 3000 m. et ultra.

Ar. Geog. *C. Balansæ* typicus montes Algerienses (Djebel Aures) incolit.; sp. affines in Hispania et Gallia obviæ.

Species hujus gregis—scilicet *C. purgans*, L. (sub *Spartio*), *C. Hænseleri*, Boiss., et *C. Balansæ*, inter sectiones *Sarothamnum* et *Spartocytisum* transitum præbentes, proxime affines sunt, et ulterius inquirendum an notæ diagnosticæ satis constantes. In var. nostra flores magnitudine *C. purgantis*, sed forma carinæ valde diversa.

C. ALBIDUS (*DC. Cat. H. Monsp.* 101, *et Prod.* ii. 155).

Mar. occid.—Mogador inter monticulos arenæ mobilis! In monte Djebel Hadid!

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Amsmiz! Prope Mzouda! Prope Seksaoua!

Ar. Geog. Stirps Maroccana verisimiliter etiam in Teneriffa indigena. Olim in Horto Orotavensi introductus, locus natalis hodie incognitus. Confer Webb, Phyt. Can. ii. p. 47.

C. TRIFLORUS (*L'Hér. Stirp.* 184; *DC. Pr.* ii. 154).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Djebel Kebir!

Ar. Geog. Regio Mediterranea imprimis occidentalis. Deest in Oriente et in Macaronesia.

C. CANDICANS (*L., et DC. Pr.* ii. 145, sub *Genista*; *DC. Fl. Fr.* iv. 504), = Teline candicans (*Webb, Phyt. Can.* ii. 36).

Mar. sept.—Tanger! (*Schousb. herb.*) *Coss. sp.*! In monte Djebel Kebir! Cap. Spartel!

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia). Deest in Oriente et verisimiliter in Græcia.

CYTISUS CINCINNATUS, *nobis*. Frutex ramis lignosis; flores ad apicem ramorum congesti subcapitati; folia trifoliolata, breviter petiolata, foliolis lanceolato-ellipticis, margine inflexis, utrinque tomentosis, præsertim in pagina superiore pilis cincinnatis (spiraliter arcte convolutis) dense obtectis, adeo ut oculo non fortiter armato videntur foveolata; vexillum vix emarginatum, extus cum calyce sericeo-villosum; carina minus quam in sp. affinibus falcata; stylus lituiformis, apice rectus, demum exsertus. Flores saturate flavi vel aurantiaci? Bracteolæ infra basin calycis ad fasciculam pilorum sericeorum reductæ.

Mar. merid.—Specimen unicum in prov. Mtouga a cll. Rein et Fritsch lectum in herb. Kew. vidi et descripsi!

Species pluribus notis ad *Cytisos* Canarienses (*Teline*, Webb.) accedit, et præsertim *C. congesto* (Willd., sub *Spartio*), sed ab his omnibus differt inflorescentia, foliis majoribus, indumento singularissimo, bracteolis ad pilos reductis nec foliaceis. Fructus nondum visus.

C. HOSMARIENSIS (*Coss. in Bull. Soc. Bot. Fr.* xx. 245, sub *Genista*).

Planta structura et habitu in grege *C. candicantis* (*Teline*, Webb) reponenda. Cel. auctor hanc in genere *Genista* collocare mavult; nobis (ducibus Benth. et H. fil. in Gen. Pl.) fas sit cum *Cytisis* enumerare in societate specierum præcedentium. Descriptionem Cossonianam proferre juvat.

"*Frutex* ut videtur elatus, ramosus, *ramis* striatis *inermibus*, vetulis cortice rimoso cinerascente, novellis patentibus vel subdeflexis cortice virescente sericeo-pubescente, foliorum pulvinis demum modice incrassatis. *Folia* in genere ampla, *petiolata*, *3-foliolata*, alterna foliolis præsertim pagina inferiore sericeo-pubescentibus, obovatis, breviter petiolatis, obtusis, muticis vel brevissime mucronulatis, terminali majore. *Stipulæ minutæ, lineares,* marcescenti-persistentes. *Flores magni, apice ramulorum* 6–8, *in racemos subcorymbosos patentes dispositi, bracteis minutissimis ovatis obtusis,* pedicellati *pedicellis* sub *calyce bibracteolatis bracteolis minutissimis ovatis obtusis. Calyx* cum pedicellis bracteolisque dense sericeo-pubescens, amplus, campanulatus, *bilabiatus, labiis tubo subtriplo longioribus,* superiore inferius subæquante bipartito lobis ovato-oblongis acuminatis, *inferiore* apice *tridentato* dentibus ovato-lanceolatis acuminatis. Corolla flava, calyce subdimidio vel subtriente longior, vexillo porrecto, amplo, ovato-suborbiculato, apice emarginato, dorso pubescenti-sericeo, alas subæquante vel paulo superante, alis carina paulo longioribus, isti subæquilatis, cultriformi-oblongis, obtusis, glabris, carina cultriformi-oblonga, obtusa, dense sericeo-villosa. *Ovarium* calyce brevius, sericeo-villosum, lineari-lanceolatum, 6-*ovulatum,* in stylum elongatum apice arcuato-ascendens sensim attenuatum. Stigma minutum, capitellatum. Legumen ignotum."

Mar. sept.—In monte Beni Hosmar prope Tetuan a P. B. Webb anno 1827 detectus!

Pace optimi amici nomen triviale scribendum *Hosmariensis* nec *Osma-*

riensis dum litera vocalis ab incolis fortiter aspiratur. Monente cel. auctore species hæc in § *Teline* collocanda. "Habitu et calycis fabrica affinis *C. heterochroo* (Webb in Bourg. Pl. Esp. 1852, n. 1719 *c*) in Hispaniæ regno Valentino prope Moxente (Bourgeau) et in Arragonia australi (Wilkomm) lecto, sed eximie distincta foliolis majoribus obovatis, floribus in racemos pedunculatos dispositis, bracteolis minutissimis calyci subcontiguis, non linearibus a calyce remotis calycibus amplioribus densius pubescentibus, dentibus labii calycini inferioris latioribus brevioribusque, carina dense sericeo-villosa, non glabra, ovario sericeo-villoso, non glabro, etc."

Legimus in eodem monte ramos *Cytisi* cujusvis foliis novellis sericeo-villosis, vix tamen huc referendi !

CYTISUS LINIFOLIUS (*L. et DC. Pr.* ii. 146, sub *Genista*; *Lam. Dict.* ii. 249).

Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)! In monte Djebel Kebir!

Ar. Geog. Regio Mediterranea occidentalis nunquam a mari remotus; ex Gallia meridionali usque Macaronesiam.

C. TRIDENTATUS (*L. et DC. Pr.* ii. 151, sub *Genista*; *Benth. et H. fil. Gen. Pl.* i. 484), var. LASIANTHA,=Genista lasiantha (*Spach, Ann. Sc. Nat.* ser. 3, iii. 147).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir!

Ar. Geog. Species est peninsulæ Ibericæ civis; var. nostra in utroque litore Freti Herculis obvia est. Legi spec. Tingitanis omnino conformia in collibus supra Algeciras.

Qui stirpem nostram cum *G. stenoptera*, Spach, comparabit facile hanc pro specie rite distincta habebit, sed in magna copia speciminum ex Hispania et Lusitania provenientium tot et tantas formas intermedias inveniet ut species quinque Spachianas in unam solam Linnæanam conjungendas esse fatebitur. Varietas nostra a cæteris vexillo sericeo, nec ulla alia nota, distinguitur.

C. FONTANESII (*Spach, Ann. Sc. Nat.* ser. 3, iii.),=Spartium biflorum (*Desf. Fl. Atl.* ii. 133, tab. 179),=Genista biflora (*DC. Pr.* ii. 146).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan circ. 1250 m.! Supra Seksaoua 1400 m.!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

Specimina nostra Algeriensibus conformia, sed flores sæpe 3, interdum 4, in apice ramorum.

ONONIS (*L. Gen.* 883).

Ó. NATRIX (*L., DC. Pr.* ii. 159).

Mar. merid.—In planitie haud procul urbe Marocco (*G. Maw spec.*)! Pr. Sektana (*R. et Fr. spec. in herb. Kew.*)!

—— ——, var. TOMENTOSA (*Boiss. Fl. Or.* ii. 59).

Mar. merid.—Prope Milhain!

—— ——, var. MICROPHYLLA (*Boiss. l. c.*),=O. ramosissima, *Dsf.*

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Tetuan (*Webb Herb.*)!

Mar. occid.—In arenosis prope Mogador! verisimiliter huc *O. natrix* β (Lowe Cat.) prope Mogador indicatus.

Mar. merid.—In provincia Shedma!

Ar. Geog.—Regio Mediterranea omnis (inclusa Macaronesia). Europa media.

O. Natrix est stirps quam maxime variabilis in plurimas falsas species ab auctoribus, etiam gravissimis, dilaniata. Varietates a celebb. Boissier et Webb propositæ ægre definiendæ. Exemplaria quæ vidi ex Africa boreali *O. pictam*, Dsf., referunt. Varietas nostra *tomentosa* verisimiliter eadem ac var. Boissieriana. Parum differt ab *O. cuspidata*, Dsf., cujus specimina authentica non vidi.

Ononis angustissima (*Lam. Dict.* i. 502; *Webb. Phyt. Can.* ii. 23), =O. longifolia (*Willd. Enum.* 750; *DC. Pr.* ii. 159).

Mar. occid.—Mogador in arenosis! (*Lowe Cat.*). In provincia Haha haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Stirps Canariensis et Mogadorensis.

Hæc mihi videtur proles *O. natricis* foliolis angustis apice argute serratis, et stipulis elongatis apice setaceis. Notas diagnosticas a beato Webb *loc. cit.* "cultura immutatis" laudatas vir optimus nusquam indicavit. Auctoritati magistrorum obsecutus hanc sicut subspeciem enumeravi.

O. VISCOSA (*L.*, *DC. Pr.* ii. 160), var.? FRUTICESCENS (*Ball, in Journ. Bot.* 1873, 304).

Differt insigniter radice ramisque inferioribus lignosis, legumine et seminibus fere intermediis inter *O. viscosam* et *O. siculam*. Corolla sat magna calycem subduplo excedens. Vexillum luteum rubro stratum.

Mar. merid.—Specimen unicum legi in distr. Reraya, in reg. inferiore Atlantis Majoris!

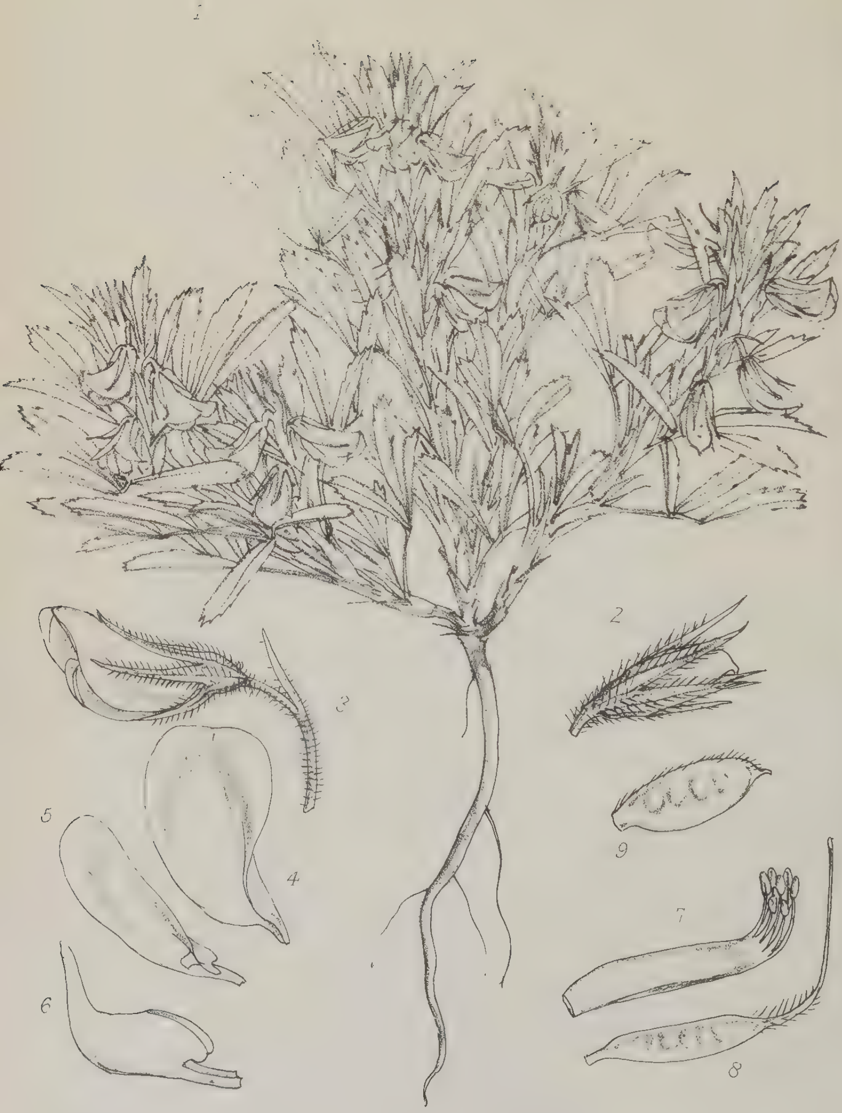
O. sicula, Guss., ab affini *O. viscosa* differt præsertim legumine angustiore polyspermo, seminibus maturis 12–20, ellipsoideo-reniformibus, pallidis; dum in *O. viscosa* semina multo majora sunt, 3–6, compressa, atro-fusca. Nostra planta melius cognita speciem novam forsan sistet, forsan nexum inter species supra memoratas.

Ar. Geog. *O. viscosa* typica peninsulam Ibericam, Galliam australem et Italiam incolit; hujus var. vel subspecies *O. breviflora*, DC., etiam in Græcia et Oriente obvia est.

O. porrigens (*Salzm. Exsicc.*),=O. fœtida (*Schsb. herb.*; *DC., Pr.* ii. 161),=O. viscosa, *Coss. MSS.*

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. herb. spec.*)!

Hanc ego pro subspecie habui dum notis plurimis ab *O. viscosa* insigniter differt. Foliola nisi in foliis infimis ad basin caulis semper acuta, minute et æqualiter serrulata; flores quam in *O. viscosa* multo majores roseo-purpurei, nec flavi vexillo apice purpurascente; legumen latius, brevius, vix glanduloso-pubescens; semina paululum majora, oculo armato minute granulata. Caules bipedales et ultro, erectius-



ONONIS POLYPHYLLA, Ball.

culi, parum ramosi. Cel. Cosson mihi benevole concessit specimina ex herb. Schousboe quæ formam minorem hujus stirpis referunt. Præter flores minores hæc a spec. nostris non diversa sunt.

ONONIS SICULA (*Guss. Prod. Fl. Sic.* ii. 387; *DC. Pr.* ii. 160).
Mar. merid.—Distr. Mesfioua! Prope Ourika (*R. et Fr. spec. in Herb. Kew.*)!
Ar. Geog. Per regionem Mediterraneam calidiorem (exclusa Macaronesia) late dispersa, sed non ubique obvia.
Præter notam ex seminibus supra relatam, differt ab *O. viscosa* pedicellis supra aristam brevissimis.

O. POLYPHYLLA (*Ball in Journ. Bot.* 1873, 304). (Plate XVI.)
Annua, pumila, e basi ramosa; herba tota virens, glanduloso hirta; folia numerosa, approximata, trifoliolata, foliolo medio stipitato, lateralibus basi disjunctis, omnibus angustis apice dentatis; stipulæ elongatæ, demum subscariosæ vaginantes; pedunculi uniflori, aristati, folia etstipulas vix æquantes; vexillum segmentis calycinis æquale, apice rubescens; legumen oblongum, latitudine sua fere duplo longius, lacinias calycinas lanceolato-cuneatas vix superans.
Mar. merid.—In planitie ad radices Atlantis Majoris distr. Mesfioua! et versus Tasseremout.
Habitu ad *O. pubescentem*, L., accedit, etsi statura multo minor; præter folia et stipulas angustiores differt pedunculis aristatis et legumine oblongo, nec breviter ovali-rhomboideo.

O. PUBESCENS (*L.*, *DC. Pr.* ii. 160).
Mar. occid.—Casa Blanca! In monte Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)!
Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

O. CINTRANA (*Brot. Phyt. Lus.* 138, tab. 57; *DC. Pr.* ii. 160).
Mar. sept.—Tanger (*Schsb. Herb. ex Coss. spec.*)! (*Webb Herb.*)! (*Brouss. spec. in Herb. Kew.*)! (*Salzm. Exsicc.*)!
Ar. Geog. Nonnisi in Lusitania et in ditione Tingitana detecta.

O. MAWEANA (*Ball. in Journ. Bot.* 1873, 304).
Annua, e basi ramosa, parce glanduloso-hirta; folia infima et suprema unifoliolata, cætera trifoliolata, foliolo medio majore stipitato, omnia obovato- vel oblongo-lanceolata, apice rotundata (rarius retusa), argute denticulata; stipulæ inferiores elongatæ, superiores dilatatæ ovatæ acutæ argute denticulatæ; pedunculi biflori, exaristati, foliis paulo longiores, infra medium furcati, sub anthesi erecti; calycis segmenta tubum bis excedentia, angusta, quinquenervia, nervo medio subobsoleto, nervis lateralibus duobus utrinque approximatis, prominulis; corolla lacinias calycinas parum excedens, insigniter bicolor, vexillo pallido striato, carina (cum alis) apice aurantiaca. Legumen nondum visum.

Mar. sept.—In ditione Tingitana, juxta stagna subsalsa, detexit oculatissimus G. Maw, botanices et præsertim floriculturæ fautor egregius.

Species ut videtur omnino distincta, nec ulli proxima nisi forte *O. hebecarpæ*, Webb. Ab hac differt imprimis pedunculis infra medium, nec apice tantum, furcatis, stipulis ter quaterve majoribus, foliis angustioribus, et cet. *O. biflora*, Dsf., longius distat pedunculo aristato, apice tantum furcato, floribus pendulis, statura multo majore. Facie similiores sunt *O. gibraltarica*, Boiss., *O. brachycarpa*, DC. Prod., *O. natricoides*, Duf., quæ omnes præter alias notas pedunculis 1-floris aristatis distinguuntur.

ONONIS ATLANTICA (*Ball, in Journ. Bot.* 1873, 304),=O. spinulosa (*Coss. in herb.*). (Plate XVII.)

Perennis, basi suffruticosa, ramis erectis; herba tota pube brevi glandulosa vestita; foliorum subsessilium foliola omnia sessilia crassiuscula, obverse cuneata, apice tantum denticulata; stipulæ brevissimæ; pedunculi rigidi, uniflori, fructiferi supra aristam brevem spinescentem reflexi; calycis laciniæ subæquales, tubo brevissimo ter longiores; petala flava, vexillo carina sesquilongiore; legumen breviter stipitatum, e basi obliqua oblongum, calyce ter longiore; semina pauca minute granulata.

Mar. merid.—In regione inferiori Atlantis Majoris. In convalle Amsmiz detexit cel. J. D. Hooker, circa 1250 m.! In monte Djebel Ouensa legit indigenus Ibrahim et spec. mihi benevole comm. cel. Cosson.

Ab *O. cenisia*, L., recedit herba glandulosa, foliis subsessilibus, pedunculorum arista rigida spinescente, calyce profundius fisso, petalis flavis nec purpurascentibus, et præsertim legumine stipitato, angustiore, et seminibus minoribus minute et undique granulatis, nec inæqualiter tuberculatis.

Propior est forsan *O. rigida*, Kze., sed in hac foliola obovata circuitu toto, nec apice tantum, dentata, stipulæ longiores insigniter dentatæ; hujus legumen a me non visum, nec descripsit cl. auctor.

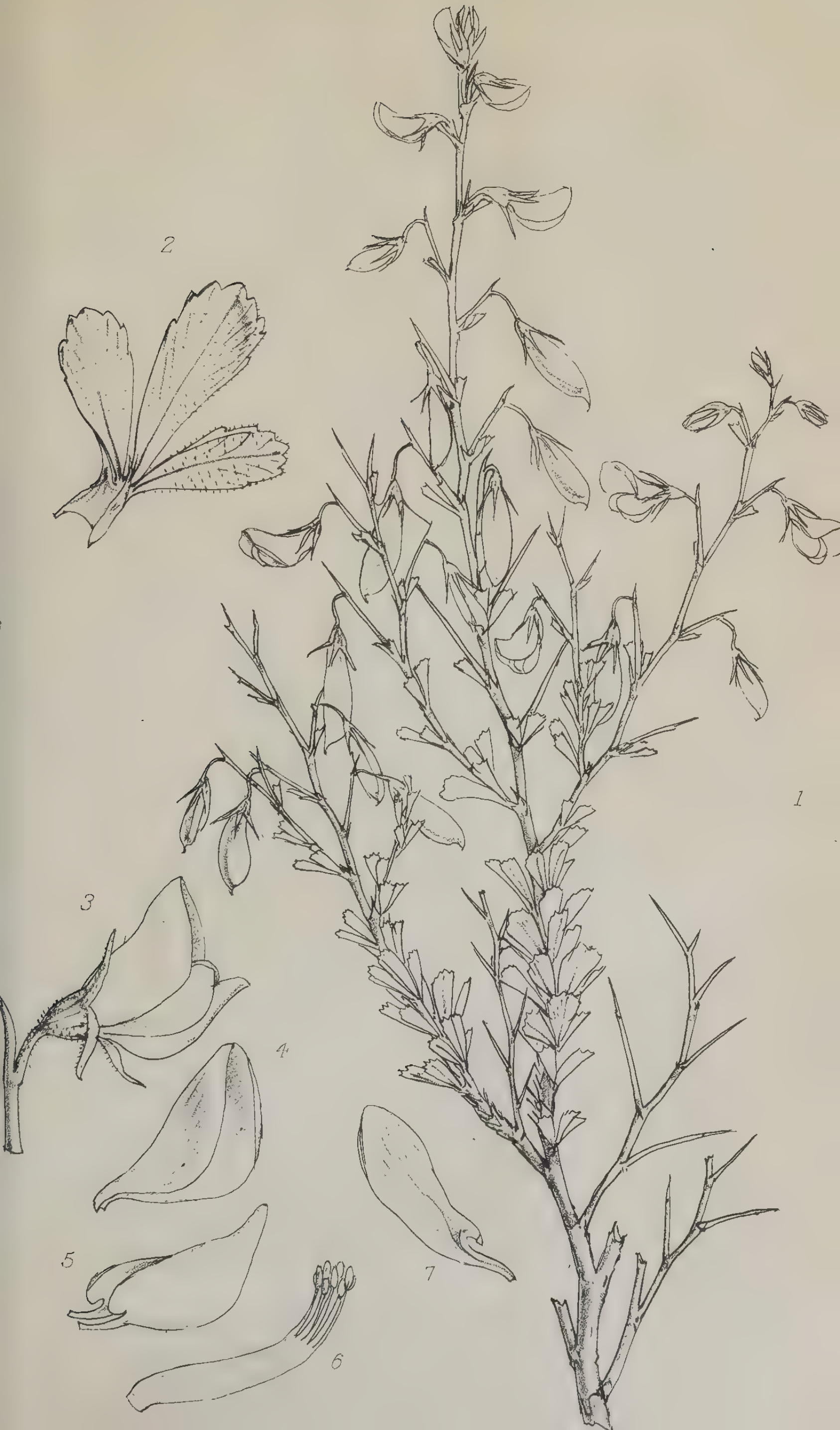
Hanc esse *O. cenisia*, Coss. MS., a Balansa in Atlante lecta, in Journ. Bot. *l. c.* mira hallucinatione deceptus dubitavi. Vir oculatissimus species probe diversas confundere nequit. Specimina *O. cenisiæ* genuinæ in Atlante Majore ab indigeno Ibrahim pariter lecta debeo humanitati cel. Cosson.

O. PENDULA (*Desf. Fl. Atl.* ii. 147, tab. 191; *DC. Pr.* ii. 162).

Mar. sept.—Tanger (*Webb Herb.*)! Cap. Spartel (*Schousb. herb.* sub "*O. reclinata*," L.). *Coss. sp.*!

Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe, spec. in Herb. Kew.* sub "*O. laxiflora*")!

Specimina nostra prope Casa Blanca lecta ab *O. Schounii* (DC. Pr. ii. 162) non diversa sunt. Hæc tamen vix pro varietate habenda, dum nulla adest nota diagnostica.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—— ——, var. Broussonnetii, = O. Broussonnetii (*DC. Pr.* ii. 161).

Mar. occid.—In arenosis prope Mogador! ubi verisimiliter Broussonnet olim legebat spec. ab ill. Candolleo descripta.

Hæc est potius lusus æstivalis quam vera varietas. Spec. nostra ineunte Junio lecta gaudent foliolis angustis glabrescentibus, stipulis subcoalitis persistentibus, floribus in racemum subaphyllum dispositis, interdum breviter pedunculatis, interdum pedunculis inferioribus elongatis subpollicaribus. Confer de evolutione sp. affinis *O. laxifloræ* observationes beati P. B. Webb (Phyt. Can. ii. 27).

Ononis laxiflora (*Desf. Fl. Atl.* ii. 146, tab. 190; *DC. Pr.* ii. 161).

Mar. merid.—In saxosis aridis prope Aïn Oumast, pr. Shedma! In prov. Mtouga!

Hæc est *O. pendulæ* arcte affinis; differt pedunculis laxe corymbosis quam in typo longioribus, nec ad apicem ramorum congestis, laciniis calycinis angustioribus, stipulis profundius denticulatis, seminibus paulo majoribus sub lente tuberculatis nec minute granulatis, et meo sensu pro subspecie enumeranda est.

Ar. Geog. *O. pendula* et *O. laxiflora* cives indigenæ Africæ boreali-occidentalis, paulo extra fines Africanas dispersæ sunt. *O. pendula* in Hispania Granatensi et in Sicilia, *O. laxiflora* in Macaronesia obvia est.

O. pendula et *O. reclinata* sunt re vera proximæ species, sed in sententiam cl. Lowe, qui has in unam speciem conjunxit (Man. Fl. Mad. i. 130), convenire nequeo. *O. pendula* non solum differt magnitudine partium omnium dupla, sed habitu toto et seminibus.

O. reclinata (*L., DC. Pr.* ii. 162).

Mar. sept.—Tanger (*Webb Herb.*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa occidentalis ex Scotia usque fretum Herculeum.

O. mollis, Savi, et *O. Cherleri,* DC., non L., sunt meræ formæ hujus speciei.

O. filicaulis (*Salzm. Exsicc.*; *Boiss. Voy. Esp.* 433, tab. 46; *Walp. Rep.* i. 625).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. Herb.*)! (*Webb Herb.*)!

Ar. Geog. Hispania Granatensis. Africa boreali-occidentalis.

Legi prope San Roque specimina Tingitanis omnino conformia!

O. antiquorum (*L., Rchb. Fl. Exc.* p. 517, et *Ic. Pl. Crit.* i. tab. 14), = O. spinosa, var. γ. glabra (*DC. Pr.* ii. 163).

Mar. merid.—Sat frequens in planitie et ad radices Atlantis Majoris. Mesfioua! Mtouga! In convalle Amsmiz circ. 1200 m.!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

In planta Maroccana rami semper tenues glabri vel superne tenuiter glanduloso-pubescentes. Spinæ elongatæ sæpius geminæ nitidæ albæ. Folia superiora unifoliolata.

ONONIS MITISSIMA (*L., DC. Pr.* ii. 163).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!
Mar merid.—Aïn Tarsil, prov. Mtouga (*J. D. H.*)!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

O. SERRATA (*Forsk. Fl. Æg.-arab.* p. 130; *DC. Pr.* ii. 163),=O. Dehnhartii (*Ten. Fl. Nap.*),=O. diffusa (*Ten. Prod. Fl. Nap.* p. 41; *DC. Pr.* ii. 163).
Mar. sept.—Tanger in arenosis maritimis (*Schsb. Herb.*).
Mar. occid.—Agadir (*Coll. Indig.* 1871)!

—— ——, var. MINOR. Flores et fructus subdimidio minores; foliola lateralia ad lacinias lineares brevissimas reducta, interdum carentia. Semina granulata paulo minora.
Mar. occid.—Ad radices montis Djebel Hadid haud procul Mogador!
Mar. merid.—In distr. Mesfioua!
Specimina ex Mesfioua formam fere intermediam referunt, et his similia sunt specimina Webbiana ex insula Lancerotta.
De *O. diffusa*, Ten., sententiæ virorum gravissimorum discordes. Præeunte cel. Boissier (Pug. Pl. Nov. Afr. Bor. p. 33, et Fl. Or. ii. 63), et observatis plurimis exemplaribus ex regno Neapolitano a Gussone, Parlatore aliisque receptis, habui *O. diffusam*, Ten., pro forma *O. serratæ*, vix aut ne vix pro varietate habendam. Vidi ex Ægypto superiore specimina var. *minori* nostræ similia.
Ar. Geog. *O. serrata*, Forsk., per regionem Mediterraneam calidiorem a Persia australi usque Macaronesiam diffusa est.

O. COSSONIANA (*Boiss. et Reut. Pug.* p. 33; *Walp. Ann.* iv. 463),= O. diffusa (*Coss. Pl. Crit.* 35, *non Ten.*).
Mar. sept.—Tanger! (*Schsb. Herb.*). *Coss. spec.*! (*Salzm. Exsicc.*, sub "*O. tingitana*" et iterum sub "*O. gibraltarica*," spec. in herb. Kew.)! (*Webb Herb.*)!
Ar. Geog. Hispania Bætica. Imper. Maroccanum.
Huic proxima est *O. hirta*, Desf.; sed hæc satis differt seminibus dimidio minoribus, flore fructuque minoribus, stipulis minimis, racemo foliato, cæterisque notis.

O. TOURNEFORTII (*Coss. Pl. Crit.* 34; *Walp. Ann.* iii. 845).
Mar. occid.—Mogador in arenosis!
Specimina quæ vidit in herb. Desfontaines cel. auctor cum scheda "*O. variegata*, Tanger," verisimiliter a Broussonnet ad Mogador lecta sunt. Nemo recentiorum hanc speciem prope Tingidem vidit, etsi in altero litore freti Herculei obvia sit.
Ar. Geog. Species Hispaniæ Bæticæ et agri Mogadorensis propria.

O. ALOPECUROIDES (*L., DC. Pr.* ii. 163), var. TRIFOLIOLATA (*Coss.

Pl. Crit. p. 33), = O. Salzmanniana (*Boiss. et Reut. Pug.* 34; *Walp. Ann.* iv. 463), = O. monophylla (*Boiss. Voy. Esp.* et *DC. Prod.* ii. 163, *non Desf. Fl. Atl.*).

Mar. sept.—Tanger (*Schousb. Herb.*, sub *O. variegata* et *O. Mauritanica*)! (*Webb Herb.*)! (*Salzm. Exsicc.* sub *O. alopecuroidi*)!

Mar. occid.—Mogador (*DC. loc. cit.*).

Vidi specimen Lusitanicum in herb. Hooker Tingitanis conforme, cui scheda "*O. paradoxa*, Welw. MSS."

Ar. Geog. O. alopecuroides per regionem Mediterraneam (exclusa Macaronesia) late dispersa est. Varietas nostra in peninsula Iberica et Imp. Maroccano obvia, alibi non indicatur.

Ex spec. in herbario Candolleano asservato et ex descriptione citato plane apparet *O. monophyllam*, DC., a stirpe Fontanesiana diversam esse, et ipsissimam var. nostram referre. Specimina ex agro Mogadorensi a DC. citata verisimiliter a Broussonnet lecta.

Folia sunt magna pro parte unifoliolata, sed superiora in racemo foliaceo plerumque trifoliolata.

ONONIS MINUTISSIMA (*L.*, *DC. Pr.* ii. 164).

Mar. sept.—Prope Tetuan (1851)! In monte Djebel Dersa prope Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea occidentalis a Dalmatia usque fretum Herculeum.

TRIGONELLA (*L. Gen.* 898).

T. MONSPELIACA (*L.*, *DC. Pr.* ii. 183).

Mar. merid.—In regione inferiore et in convallibus calidioribus Atlantis Majoris. Mesfioua! Prov. Shedma pr. Mskala! Prov. Mtouga! In convalle Aït Mesan circ. 1300 m.!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

T. POLYCERATA (*L.*, *DC. Pr.* ii. 184).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Amsmiz circ. 1400 m.!

Ar. Geog. Gallia australis. Hispania. Marocco.

—— ——, var. ATLANTICA (*Ball, in Journ. Bot.* 1873, 305). Differt a typo legumine dimidio breviore, rugis transversis arcuatis nec valde elongatis, stipulis latioribus, seminibus (nondum maturis) nigropunctatis.

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan a 2100 m. ad 2600 m.

MEDICAGO (*L. Gen.* 899).

M. LUPULINA (*L.*, *DC. Pr.* ii. 172).

Mar. merid.—Mesfioua! In convalle Aït Mesan 1200–1400 m.!

Ar. Geog. Europa omnis (exclusa arctica). Asia temperata. Regio omnis Mediterranea (inclusa Macaronesia). Abyssinia.

Specimina nostra formam inter typum et *M. Cupanianam* (Guss. Fl. Sic. ii. 362) mediam referunt. Hæc novissima in regione Mediterranea sæpe occurrit, certe ad meram varietatem reducenda.

MEDICAGO SUFFRUTICOSA (*Ram. in DC. Fl. Fr.* iv. 541; *DC. Pr.* ii. 173).

Mar. merid.—In regione subalpina et alpina Atlantis Majoris. In convalle Aït Mesan supra Arround, et in jugo Tagherot a 2200 m. usque 3000 m.! In monte Djebel Tezah legit J. D. H.!

Ar. Geog. Hucusque in Pyrenæis tantum nota. Sp. affinis *M. leiocarpæ*, Benth., occurrit etiam in montibus Hispaniæ australis.

Nisi pedunculis paucifloris (plerumque bifloris) specimina nostra Pyrenæis omnino conformia.

M. HELIX (*Willd. Sp. Pl.* iii. 1409).

—— ——, var. *α*, LÆVIS, = M. lævis (*Desf. Fl. Atl.* ii. 213; *DC. Pr.* ii. 174).

Mar. sept.—Prope Tanger! (*Webb Herb.* sub *M. tornata*)! Inter Tetuan et Ceuta forma subinermis!

Mar. occid.—Ex insula Mogador (*Balansa spec.*)!

—— ——, var. *β*, SPINULOSA (*Moris, Fl. Sard.* i. 438, tab. 39. fig. B).

Mar. occid.—In maritimis prope Mogador et præsertim in insula!

Ar. Geog. Regio Mediterranea occidentalis calidior (inclusa Macaronesia). Deest in Gallia et in Italia superiore et media.

Pariter ac plurimæ hujus generis difficillimi hæc est species polymorpha et formæ extricatu parum faciles. Cel. Moris in Flora Sard. *l. c.* species Sardoas optime illustravit, et mihi certiorem fecit numerum spirarum ad species delimitandas parum valere. In hac nempe variant 2, 3 vel 4. Mirum videtur in insula exigua juxta urbem Mogador cl. Balansa formam lævem, spinis omnino destitutam, die 25 Aprilis 1867 legisse, dum nos post quatuor annos die 27 Aprili 1871 nonnisi legumina spinulosa vidimus in plantis quæ locustis superstiterunt. Ardua est sententia et naturæ scrutatoribus remittenda utrum inter plantas cujusvis varietatis in eodem loco crescentes causas externas—cœli temperiem variabilem, frequentiam vel varietatem animalium nocivorum, etc.—agere ut una alterave varietas magis floreat, an progeniem ejusdem parentis ab iisdem causis modificatam, alterna vice legumina lævia vel spinulosa proferre credendum sit. In *M. helice* spiræ sæpissime, sed non semper, dextrorsum versæ, dum in *M. litorali* fere semper sinistrorsæ sunt. Hac nota *M. littoralis β, inermis,* quæ interdum *M. helici* similis est, facile dignoscitur.

M. ORBICULARIS (*All. Fl. Ped.* No. 1150; *DC. Pr.* ii. 174).

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Abyssinia.

MEDICAGO TORNATA (*Willd. Sp. Pl.* iii. 1409; *DC. Pr.* ii. 175)?
Specimina florentia sed nondum fructifera in ditione Tingitana lecta huc retuli, sed hodie mihi omnino incerta videntur.
Species tamen in Marocco septentrionali inquirenda.

M. LITTORALIS (*Rohde in Lois. Not.* 118; *DC. Pr.* ii. 177).
—— ——, var. α (*Moris, Fl. Sard.* i. 439, tab. 40. fig. A), = M. cylindracea (*DC. Cat. Monsp.* et *Prod.* ii. 178).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Prope Cap. Spartel! Inter Tanger et Tetuan!
Mar. occid.—Agadir (*Coll. Indig.* 1871)!

—— ——, var. γ, LONGEACULEATA (*Moris, l. c.* p. 440), = M. littoralis, var. α (*Ser. in DC. Pr. l. c.*).
Mar. occid.—Frequens in ditione Mogadorensi. Huc verisimiliter *M. littoralis* (Lowe Cat.) referenda est. Legi prope Mogador! juxta Aïn el Hadjar! et in prov. Haha haud procul Mogador!
Mar. merid.—Prope Ourika! specimen leguminibus intermediis!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).
Var. β, *inermis*, Moris, *loc. cit.* in Marocco nondum detecta est. Hæc sec. cel. Moris est eadem ac *M. striata*, Bast. et DC. Prod. Sed in *M. striata* monentibus Gren. et God. (Fl. Fr. i. 387) spiræ dextrorsæ, dum in *M. littorali* fere semper sinistrorsæ. Inter specimina plurima agri Mogadorensis tantum duo spiris dextrorsum versis detexi. Beatus Lowe (Man. Bot. Mad. 163) hanc cum sequente conjunxit. Re vera proximæ sunt species, sed mihi videntur satis diversæ, nec transitum unquam observavi.

M. TRIBULOIDES (*Desr. in. Lam. Dict.* iii. 635; *DC. Pr.* ii. 178; *Moris, Fl. Sard.* tab. 41).
Mar. sept.—In maritimis prope Tanger! Inter Tanger et Tetuan!
Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).
—— ——, var. LONGEACULEATA, *nob.* Leguminis aculeæ ipsius diametrum subæquantes attenuatæ.
Mar. sept.—Prope Tanger!
Facie valde diversa, sed differentias graves non video. In spec. Maroccanis spiræ *M. tribuloides* fere semper dextrorsum versæ, dum monentibus Gren. et God. in Gallia sinistrorsum vertuntur, et hujus sententiæ mihi fidem faciunt exemplaria plurima ex Gallia, Hispania, Italia, et Oriente. Inter specimina Algeriensia video nonnulla spiris sinistrorsis, altera dextrorsis. Præter alias notas *M. tribuloides* differt a grege *M. turbinatæ* pedunculis aristatis.

M. MARINA (*L., DC. Pr.* ii. 176).
Mar. sept.—Tanger (*Salzm. Exsicc.*)! In litore Atlantico a Cap. Spartel meridiem versus!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia). Gallia occidentalis.

MEDICAGO GERARDI (*Willd. Sp. Pl.* iii. 1415; *DC. Pr.* ii. 179).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia). Europa media.

Hæc est fere certe *M. polymorpha*, var. *rigidula*, L.,=*M. rigidula* (Desr. in Lam. Dict. iii. 634, vix Willd.). De *M. rigidula* auctores gravissimi dissenserunt. Nomen *M. Gerardi* ab omnibus receptum, etsi recentius, nullomodo mutandum. Affinitatem proximam *M. Gerardi* et *M. turbinatæ* optime indicavit cel. Boissier in 'Flora Orientali,' ii. pp. 100, 101.

M. TURBINATA (*Willd. Sp. Pl.* iii. 1409; *DC. Pr.* ii. 175; *Boiss. Fl. Or.* ii. 100), var. ACULEATA (*Moris, Fl. Sard.* i. 445, tab. 45 B).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Amsmiz circ. 1200 m.! Shedma!

In hac legumen apice minus ovoideum potius doliiforme, pubescens, nervo dorsali prominente, aculei breves.

—— ——, var. MURICATA, *Boiss.*,=M. muricata (*Benth. Cat. Pyr.* 102; *Guss. Fl. Sic. Prod.* ii. 574, *vix Willd.*),=M. neglecta (*Guss. loc. cit.* 575).

Mar. sept.—Tanger! Tetuan (*Webb Herb.*)! In monte Beni Hosmar, *J. D. H.*!

Mar. occid.—Frustulum huc referendum inter plantas prope Mogador lectas inveni! Casa Blanca!

Mar. merid.—Videtur sat frequens in regione inferiore et in convallibus calidioribus Atlantis Majoris. Mesfioua! Tasseremout! Reraya! In convalle Aït Mesan!

Ar. Geog. *M. turbinata* regionem Mediterraneam imprimis occidentalem incolit. Fertur in Oriente, sed spec. non vidit cel. Boissier, et deest in Macaronesia. Var. *muricata* in Gallia australi, Hispania et in Imp. Maroccano haud infrequens.

Duce cel. Boissier *M. muricatam*, Benth., ad var. *M. turbinatæ* reduxi, sed a typo magis differt quam var. *aculeata*, Moris, præsertim legumine subgloboso, spiris centralibus majoribus, et aculeis longioribus. Spiræ fere semper (vel semper) sinistrorsum versæ. Inter specimina juniora prope Tanger lecta pedunculis bifloris donata, pedunculum unicum triflorum observavi.

M. SPHÆROCARPA (*Bert. Amœn. Ital.* 91; *DC. Pr.* ii. 180).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia), sed infrequens.

MEDICAGO DENTICULATA (*Willd. Sp. Pl.* iii. 1414; *Benth. Cat. Pyr.* 103; *DC. Pr.* ii. 176).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Mogador (*Lowe Cat.*)?

Mar. merid.—In convalle Amsmiz!

Ar. Geog. Europa media. Asia temperata et Japonia. Regio Mediterranea omnis (inclusa Macaronesia). India boreali-occidentalis. Abyssinia.

M. lappacea (*Desr. in Lam. Dict.* iii. 637; *Gren. et God. Fl. Fr.* i. 390), var. PENTACYCLA,=M. pentacycla (*DC. Cat. Monsp.* 124, et *Prod.* ii. 177).

Mar. sept.—Tanger pluribus locis! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan!

Mar. occid.—Casa Blanca!

Mar. merid.—Prov. Shedma! In ruderatis urbis Marocco!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

Auctores gravissimi—Webb in Phyt. Can. ii. 64, Boissier in Fl. Or. ii. 103—*M. pentacyclam* inter varietates *M. denticulatæ* enumerarunt; et eadem sententia placuit cel. Morisio (Fl. Sard. i. 446). Nonnullis *M. lappacea*, Desr., est eadem ac *M. denticulata*, W., aliis est fere ipsissima *M. pentacycla*. Permultis exemplaribus accurate scrutatis, et observationibus cel. Gren. et Godr. *l. c.* rite perpensis, *M. denticulatam* cum var. *M. apiculata* pro typo speciei habui dum *M. lappaceam*, cum var. *pentacycla*, pro subspecie enumeravi. Sunt re vera plantæ proxime affines et notæ diagnosticæ a Gren. et God. laudatæ non semper certæ. *M. lappacea* distinguitur pedunculis 5–8-floris nec 2–3-floris, leguminis spiris mediis æqualibus, aculeis divaricatis plerumque multo brevioribus, nec patentibus, seminibus reniformibus, nec oblongis umbilico leviter depressis. Mihi inter specimina Maroccana, Italica et Hispanica *M. pentacyclæ* occurrunt, sed rarius, exemplaria pedunculis quinquefloris. In *M. denticulata*, fructu minore semper donata, aculei fere semper divaricati, dum in *M. lappacea* sunt sæpissime patentes. In icone Morisiana (Fl. Sard. tab. 48), *M. lappacea* nostra (in Italia media sæpia obvia) sat bene delineatur, sed fig. 4 ejusdem tabulæ (legumine extenso aculeis brevibus divaricatis) ad plantam alienam (*M. denticulatam*) certe spectat. Quoad notam diagnosticam e seminibus deductam ego sæpius vidi semina *M. pentacyclæ* oblonga vix emarginata, sed vereor ne hæc nota incerta sit. Vidi specimina seminibus intermediis. Differentiæ inter *M. lappaceam* et *M. pentacyclam* parvi momenti sunt. Prior gaudet leguminibus aliquid minoribus sæpissime tricyclis. In *M. pentacyclæ* exemplaribus minoribus depauperatis legumina tricycla haud raro obvia sunt, sed normalia semper spiris quinque donata.

In spec. nostris Maroccanis spiræ semper sinistrorsum versæ. Vidi spec.

duo Tingitana pedunculis breviter aristatis. Nota igitur ex pedunculis non aristatis haud omnino certa.

MEDICAGO MACULATA (*Willd. Sp. Pl.* 1414; *DC. Pr.* ii. 179).
Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (1851)!
Ar. Geog. Europa media. Regio Mediterranea, sed non ubique. Deest in Macaronesia.

M. LACINIATA (*All. Fl. Ped.* No. 1159; *DC. Pr.* ii. 180).
Mar. occid.—Mazagan!
Mar. merid.—Satis frequens in regione inferiore. Legimus pluries in prov. Shedma! in planitie prope urbem Marocco! in distr. Mesfioua!
Ar. Geog. Regio Mediterranea imprimis calidior (inclusa Macaronesia). Deest in Græcia, Asia Minore, et in Italia australi. Frequens in Africa boreali ultramontana.
Specimina Maroccana quæ cel. Cosson ex Oasi Akka communicavit, Algeriensibus et Tunetanis omnino conformia sunt. Nostra invicem ludunt aculeis fere duplo longioribus. Pedunculi aristati fere semper uniflori. Legumen maturum in pedunculo semper solitarium. Semina pro genere numerosa, 7–9, oblongo-reniformia.

M. MINIMA (*Lam. Dict.* iii. 636; *DC. Pr.* ii. 178).
Mar. merid.—Ad radices Atlantis Majoris et in convallibus calidioribus. Mesfioua! Aït Mesan! et alibi visa.
Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia). Abyssinia.
Specimina Maroccana ad var. γ. *longisetam* (DC. Pr. *l. c.*) referenda sunt. Sed inutile mihi videtur varietates ex sola longitudine aculeorum (in omnibus Medicaginibus admodum variabili) desumptas enumerare.

M. INTERTEXTA (*All. Fl. Ped.* No. 1152; *Webb, Phyt. Can.* ii. 62), = M. echinus (*DC. Fl. Fr.* iv. 546, et *Prod.* ii. 181; *Moris, Fl. Sard.* tab. 52), = M. muricata (*Salzm. Exsicc. sec. Webb*).
Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)!
Ar. Geog. Italia. Sicilia. Africa borealis. Macaronesia.

MELILOTUS (*Juss. Gen.* 356).

M. INDICA (*All. Fl. Ped.* No. 1121; *Moris, Fl. Sard.* tab. 56), = M. parviflora (*Desf. Fl. Atl.* ii. 192; *DC. Pr.* ii. 187).
Mar. occid.—Mazagan! Mogador frequentissime! (*Lowe Cat.*). Prov. Haha haud procul Mogador!
Mar. merid.—Sat frequens in regione inferiore Atlantis Majoris. In convalle Ourika! Aït Mesan 1200–1400 m.!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In India

orientali et China (an spontanea?). In America boreali et Cap. Bon. Spei introducta.

MELILOTUS SULCATA (*Desf. Fl. Atl.* ii. 193; *DC. Pr.* ii. 189).
Mar. merid.—Prope Misra Ben Kara!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

—— ——, var. MAJOR, *Camb.*,=M. compacta (*Salzm. in Guss. Prod. Fl. Sic.* ii. 485),=M. intermedia (*Boiss. Voy. Esp.* 475).
Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)!
Mar. occid.—Casa Blanca! Mazagan!
Ar. Geog. Per totam regionem Mediterraneam hinc inde occurrit.
Specimen ad Mazagan lectum differt stipulis omnibus subintegerrimis.

TRIFOLIUM (*L. Gen.* 896).

T. ANGUSTIFOLIUM (*L., DC. Pr.* ii. 189).
Mar. sept.—Tanger! (*Webb Herb.*)! Tetuan (1851)!
Mar. occid.—Casa Blanca! Djebel Hadid haud procul Mogador (*R. et Fr. spec. in herb. Kew.*)!
Mar. merid.—Prope Amsmiz!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

T. ARVENSE (*L., DC. Pr.* ii. 190).
Mar. sept.—Tanger (*Webb Herb.*)!
Mar. occid.—Casa Blanca!
Ar. Geog. Europa omnis (exclusa arctica). Regio omnis Mediterranea (inclusa Macaronesia). Sibiria Uralensis. Abyssinia.

—— ——, var. PRESLIANUM, *nob.*,=T. preslianum (*Boiss. Diagn. Pl. Or.* ser. 1, ii. 25).
Mar. merid.—Prope Ourika (*R. et Fr. spec. in herb. Kew.*)!
Ar. Geog. Asia Minor. Africa borealis. Forsan alibi in reg. Mediterranea.
Nisi fallor vidi in Oriente formas intermedias.

T. LIGUSTICUM (*Balb. in Act. Acad. Ital.* i. 192; *DC. Pr.* ii. 191).
Mar. sept.—Tanger (*Schsb. Herb.*)!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

T. LAPPACEUM (*L., DC. Pr.* ii. 191).
Mar. sept.—Tanger (*Schsb. Herb.*)! (*Salzm. Exsicc.*)! (*Webb Herb.*)!
Mar. occid.—Casa Blanca!
Mar. merid.—Ad radices Atlantis Majoris. Mesfioua! Amsmiz!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

T. BOCCONI (*Savi, Obs. Trif.* 37; *DC. Pr.* ii. 192).
Mar. sept.—Djebel Kebir prope Tanger (*Schsb. Herb.* sub "*T. gemellum*" et "*T. biceps*")!
Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). Europa occidentalis. Deest in Asia Mediterranea.

In spec. nonnullis Gallicis dentes calycini minus inæquales; in nostris et in plurimis a me scrutatis dentes cal. inferiores superioribus duplo longiores et corollam excedentes.

TRIFOLIUM ATLANTICUM (*Ball in Journ. Bot.* 1873, 305). (Plate XVIII.)

Annum, pumilum, e basi ramosum; herba tota molliter villosa; folia in ramis prostratis subæqualia, longiuscule petiolata, foliolis obovato-cuneatis vix denticulatis; stipulæ superiores dilatatæ, breviter acuminatæ, insigniter nervosæ; capitula gemella, cylindracea, sessilia, in ramis terminalia; calycis dentes villosi subæquales, corollam pallide rubentem vix attingentes; semina minima, orbicularia, subcompressa, radicula non prominula.

Mar. merid.—In regione subalpina Atlantis Majoris. Legi in convalle Aït Mesan! circ. 2100 m.

Ab affini *T. Bocconi*, Savi, distinguitur imprimis ramis debilibus, nec strictis, indumento villoso, foliis omnibus longiuscule petiolatis, nec inferioribus breviter petiolatis superioribus subsessilibus, calycis dentibus mollibus subæqualibus, nec rigidis inæqualibus, seminibus orbicularibus, nec reniformi-ovoideis, radicula prominula donatis.

T. SCABRUM (*L., DC. Pr.* ii. 192).

Mar. sept.—Tanger (*Schsb. Herb.*), *Coss. spec.*! Inter Tanger et Tetuan! Tetuan (1851)!

Mar. occid.—Mazagan!

Mar. merid.—In umbrosis regionis inferioris. Sheshaoua! Amsmiz!

Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).

T. MARITIMUM (*Huds. Fl. Angl.* 284; *DC. Pr.* ii. 192).

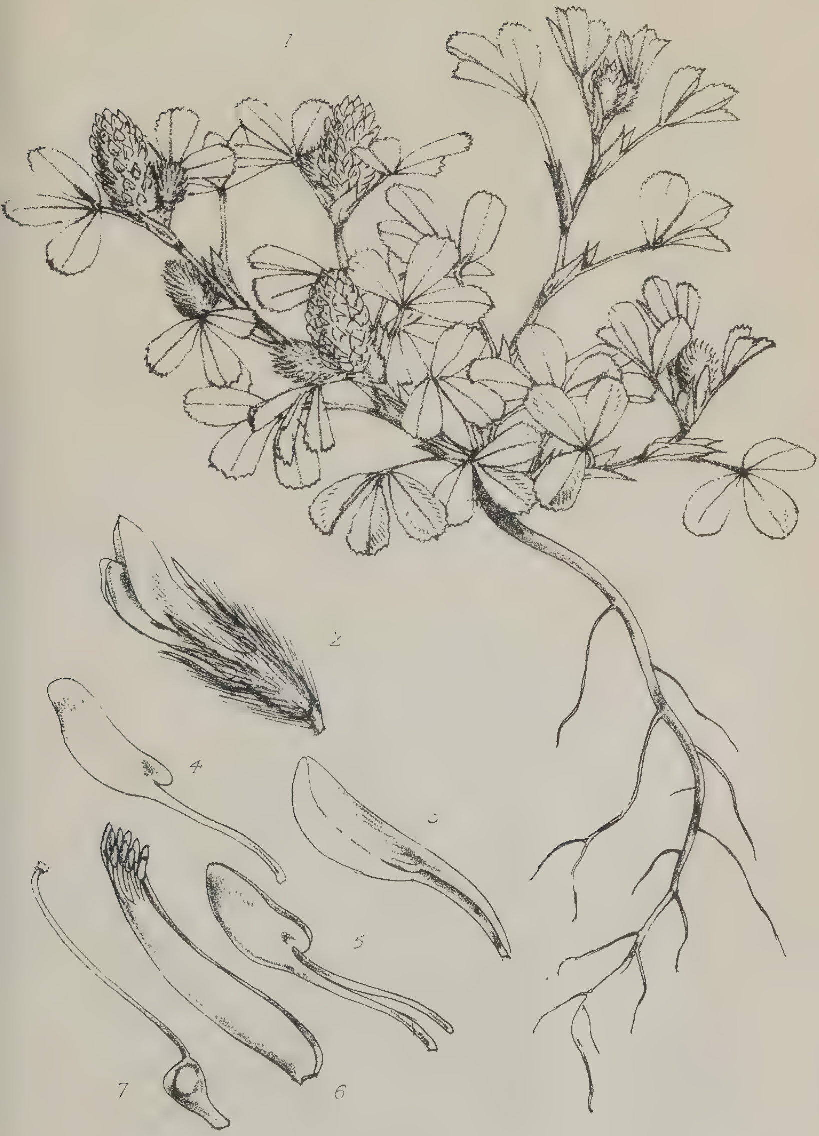
Mar. sept.—Tanger (*Schousb. Herb.* sub "*T. squarrosum*"), *Coss. spec.*! (*Webb Herb.*)! Prope Cap. Spartel! In regione collina inter Tanger et Tetuan!

Ar. Geog. Europa occidentalis. In regione Mediterranea late dispersa sed infrequens. In Macaronesia nonnisi in ins. Madeira.

T. BRACTEATUM (*Schousb. in Willd. Enum.* 792; *DC. Pr.* ii. 195), = T. leucophæum (*Schousb. MSS. icon. ined.*) forma floribus albis.

Mar. sept.—Tanger (*Schsb. Herb.*, "In collibus apricis inter *Chæmaropem humilem*"), *Coss. spec.*! et iterum (sub "*T. leucophæum*, Schsb.")! (*Webb Herb.*, sub "*T. pallidum*, W. K.? In rupestribus Tingitanis")! Eandem plantam legit Schousboe in monte Djebel Kebir.

Cel. Coss. hoc pro lusu *T. pratensis*, L., habet; mihi tamen, licet dubitative, pro specie vel saltem pro subspecie enumerandum videtur. A *T. pratensi* differt stipulis chartaceis, a nervis parallelis prominentibus eximie striatis, sub capitulo valde expansis, fere rotundatis,



W.H.Fitch lith.

TRIFOLIUM ATLANTICUM, *Ball.*

Fitch imp

apice acuminato-setaceis, et calycis laciniis magis inæqualibus. Plantæ nostræ var. levis est *T. bæticum* (Boiss. Voy. Esp. Append. 725; Walp. Ann. ii. 349). Hoc parum differt caulibus elatioribus, habitu laxo, calycis dente inferiore superioribus subduplo-, nec sesquilongiore.

Ar. Geog. Species in utroque litore freti Herculei obvia; nec alibi?

TRIFOLIUM CHERLERI (*L., DC. Pr.* ii. 196).

Mar. sept.—Tanger (*Schsb. Herb.*), *Coss. spec.*!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

T. STELLATUM (*L., DC. Pr.* ii. 197).

Mar. sept.—Tanger! Tetuan! (*Webb Herb.*)!

Ar. Geog. In tota regione Mediterranea frequentissimum, hucusque nonnisi in Marocco septentrionali detectum.

T. GLOMERATUM (*L., DC. Pr.* ii. 198).

Mar. sept.—Tanger! Djebel Kebir (*Schsb. Herb.*), *Coss. spec.*!

Mar. merid.—Ad radices Atlantis Majoris. Mesfioua! Ourika!

Ar. Geog. Europa occidentalis. Regio omnis Mediterranea (inclusa Macaronesia). Deest in Græcia et Macedonia.

—— ——, var. CONDENSATUM, *nob.* Forma pumila, condensata, pauciflora, calycis dentibus et stipulis magis herbaceis, pilosiusculis.

Mar. merid.—In regione subalpina et alpina Atlantis Majoris. In convalle Aït Mesan et in jugo Tagherot a 2400 m. usque 3000 m.!

T. STRICTUM (*L., DC. Pr.* ii. 198),=T. lævigatum (*Poir. Voy.* ii. 219; *Desf. Fl. Atl.* ii. 195, tab. 208).

Mar. sept.—In monte Djebel Kebir prope Tanger (*Schousb. Herb.* sub "*T. lucidum*"), *Coss. spec.*!

Ar. Geog. Europa media, in Gallia et Hungaria. Regio Mediterranea sed non ubique. Deest in Asia Mediterranea, in Græcia et in Macaronesia.

T. REPENS (*L., DC. Pr.* ii. 198).

Mar. sept.—Inter Tanger et Tetuan (*J. D. H.*)! Tetuan (1851)!

Mar. merid.—In regione inferiore Atlantis Majoris. Prope Ourika (*R. et Fr. spec. in herb. Kew.*)! Aït Mesan circ. 1500 m.! Taradut (*R. et Fr. spec.*)!

Ar. Geog. Europa omnis. Sibiria. America borealis. In omni regione Mediterranea late diffusa, sed in calidioribus infrequens.

T. HUMILE (*Ball, in Journ. Bot.* 1873, 305).

Perenne, pumilum, cæspitosum; rhizoma lignosum, ramosum, pedunculos subpollicares petiolis subæquales edens; foliorum foliola obovata, minute denticulata; stipulæ basi scariosæ, elongatæ, in apicem viridem sensim attenuatæ; capitulum ex pedicellis ciliatis bracteolatis demum reflexis laxum; calycis parce ciliati dentes inæquales tubo 10-nervi breviores, nervis intermediis sub sinu bifurcatis, unde dentes trinerves; corolla (pro grege) parva; legumen sessile, biovulatum; semina compressa, suborbicularia, hilo breviter emarginata, lævissima.

Mar. merid.—In regione alpina Atlantis Majoris. Legi in jugo Tagherot ad 3000 m.!

Proximum *T. cæspitosum,* Reyn., differt stipulis cuspidato-acuminatis, nec apicem versus attenuatis, pedicellis erectis, nec reflexis, bracteolis brevioribus, calycis dentibus brevioribus. Nostra species fere media est inter *T. cæspitosum,* Reyn., et *T. Parnassi,* Boiss. et Sprun., a quo differt, præter alias notas, seminibus lævissimis nec minute granulatis.

Melius observatæ hæ formæ ad subspecies forsan reducendæ, quibus adsociandum erit *T. pallescens,* Schreb. In Alpibus Helveticis, Sabaudis, et Pedemontanis characteres differentiales inter *T. cæspitosum* et *T. pallescens* satis stabiles ego semper observavi, sed in Alpibus Carinthiæ et Carniolæ formæ intermediæ mihi obviæ sunt. Simili modo specimina *T. Parnassi* accuratius explorata inter se discrepant. Specimina ex monte Parnasso ostendunt dentes calycinos valde inæquales, quorum superiores tubo longiores sunt; spec. ex monte Taygeto gaudent contra dentibus brevissimis; spec. denique ex monte Oleno prioribus intermedia sunt.

Si pro subspeciebus unius ejusdemque speciei has formas habemus, nomen *T. cæspitosum,* antiquius et sat congruum, pro typo retinendum.

TRIFOLIUM ISTHMOCARPUM (*Brot. Phyt. Lus.* 148, tab. 61; *DC. Pr.* ii. 201), = T. mauritanicum (*Salzm. Exsicc.*).

Mar. sept.—Tanger! (*Schousb. Herb.* sub "*T. rubicundum*" et "*T. erythræum*"), *Coss. spec.*! (*Webb Herb.*)! (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca!

Ar. Geog. Africa boreali-occidentalis. Peninsula Iberica. Sicilia.

Foliola argute serrulata, apice rotundata vel acuta; stipulæ vaginantes parte libera lanceolato-subulatæ; flores in capitulo sessiles, basi minute bracteolati; dentes calycis ex nervo prominulo subulati. Flores in spec. Algarbiensibus et Algeriensibus videntur albidi, in Maroccanis semper rubri vel carnei.

T. SUBTERRANEUM (*L., DC. Pr.* ii. 202).

Mar. sept.—Tanger! In monte Beni Hosmar prope Tetuan!

Ar. Geog. Europa occidentalis. Regio Mediterranea omnis (inclusa Macaronesia).

T. SPUMOSUM (*L., DC. Pr.* ii. 202).

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

Legumina in spec. nostris semper tetrasperma, in rostrum viride attenuata, rostro longe exserto.

TRIFOLIUM RESUPINATUM (*L., DC. Pr.* ii. 202).

Mar. sept.—Tanger! (*Webb Herb.*)! Tetuan ad ostium fluminis (1851)!

Mar. merid.—Ad radices Atlantis Majoris. Mesfioua! Amsmiz! Reraya!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Gallia occidentalis.

T. FRAGIFERUM (*L., DC. Pr.* ii. 202).

Mar. sept.—Tanger (*Salzm. Exsicc.* sub "*T. macrocephalum*")! In monte Djebel Kebir! Tetuan (1851)!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea (inclusa Macaronesia).

T. TOMENTOSUM (*L., DC. Pr.* ii. 203).

Mar. sept.—Tanger! Inter Tanger et Tetuan!

Mar. merid.—In regione inferiore et media Atlantis Majoris. Mesfioua! In convalle Aït Mesan circ. 2000 m. (*J. D. H.*)!

Ar. Geog. Regio omnia Mediterranea (inclusa Macaronesia).

T. PROCUMBENS (*L., DC. Pr.* ii. 205), var. CAMPESTRE (*Seringe in DC. Pr. l. c.*),=T. campestre (*Schreb. in Sturm D. Fl.* fasc. 16), =T. agrarium (*Poll. Fl. Pal.* ii. 342; *Savi, Bot. Etr.* iv. 48; *Gren. et God. Fl. Fr.* i. 423; *non Schreb.*). Confer Benth. in Brit. Fl.

Mar. sept.—Tetuan! (*Webb Herb.*)!

Mar. occid.—Mogador (*Lowe Cat.*). Casa Blanca!

Mar. merid.—Ad radices Atlantis Majoris. Mesfioua! Ourika!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea (inclusa Macaronesia). Abyssinia.

ANTHYLLIS (*L. Gen.* 864).

A. GERARDI (*L., DC. Pr.* ii. 169).

Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)! In monte Djebel Kebir!

Ar. Geog. Regio Mediterranea occidentalis a Corsica et Sardinia usque Lusitaniam. Deest in Macaronesia.

A. VULNERARIA (*L., DC. Pr.* ii. 170).

Mar. sept.—Prope Tetuan, et in monte Beni Hosmar (*Webb Herb.*)!

Mar. merid.—In regione inferiore et subalpina Atlantis Majoris. In convalle Aït Mesan usque 2400 m.!

In spec. nostris flores pallide citrini. Folia primaria simplicia, caulina 4–6-juga, foliolo terminali maximo vel cæteris conformi.

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea fere omnis (exclusa Macaronesia). Abyssinia.

—— ——, var. DILLENII,=A. Dillenii, *Schult.*

Mar. occid.—Djebel Hadid haud procul Mogador (*R. et Fr. spec. in herb. Kew.*)!

Mar. merid.—In regione inferiore et ad radices Atlantis Majoris. Tasseremout! Seksaoua! Aït Mesan 1200–1500 m.!

ANTHYLLIS TEJEDENSIS (*Boiss. Bibl. Gen.* 1838, *Elench.* 58; *Walp. Rep.* i. 634).

Mar. sept.—In summis rupibus montis Beni Hosmar prope Tetuan!

Ar. Geog. Hispania Granatensis. Montes Tetuanenses.

Specimina nostra nondum florentia sed Hispanicis adamussim conformia.

A. HAMOSA (*Desf. Fl. Atl.* ii. 151; *DC. Pr.* ii. 171).

Mar. occid.—Haud procul Mogador, juxta Aïn el Hadjar!

Ar. Geog.—Africa borealis. Hispania Granatensis.

Unicum specimen inveni, verisimiliter depauperatum, foliis bijugis foliolis angustis; tubo calycino gracili, multo minus hirsuto quam in spec. Algeriensibus, et dentibus magis inæqualibus. Planta ulterius inquirenda.

A. TETRAPHYLLA (*L., DC. Pr.* ii. 171),=Physanthyllis tetraphylla (*Boiss. Voy. Esp.* 162).

Mar. sept.—Tanger! (*Webb Herb.*)! Tetuan!

Mar. merid.—Ad radices Atlantis Majoris et in convallibus inferioribus. Ourika! Seksaoua! Sektana! In convalle Aït Mesan!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

DORYCNIUM (*Vill. Fl. Dauph.* iii. 416).

D. RECTUM (*L.*, sub *Loto*; *Ser. in DC. Pr.* ii. 208).

Mar. sept.—Tanger!

Mar. merid.—Juxta Gurguri prope Amsmiz!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

—— ——, var. PAUCIFLORUM, *nob.* Capitulis multo minoribus, paucifloris.

Mar. merid.—Inter Ourika et Reraya! Prope Ourika (*R. et Fr. spec. in herb. Kew.*)!

LOTUS (*L. Gen.* 879).

L. EDULIS (*L., DC. Pr.* ii. 209).

Mar. sept.—Tanger (*Schsb.*) *Coss. spec*! Tetuan (1851 et 1871)! In monte Djebel Dersa prope Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

L. ORNITHOPODIOIDES (*L., DC. Pr.* ii. 209).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (1851)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

L. ARENARIUS (*Brot. Fl. Lus.* ii. 120; *DC. Pr.* ii. 210),=L. aurantiacus (*Boiss. Voy. Esp.* 174, tab. 53),=L. canescens (*Kunze, Chlor. Hisp.* No. 534).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe Cat.*) In prov. Haha haud procul Mogador!

Mar. merid.—In provinciis meridionalibus cisatlanticis, valde frequens in planitie et ad radices Atlantis Majoris. Legimus pluries in prov. Shedma! Mesfioua! Amsmiz! Ourika!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

—— ——, var. WEBBII, *nob.*,=L. dumetorum (*Webb, MSS. ined., et in Bourgeau Pl. Can.*).

Mar. occid.—In arenosis prope Mogador! Aïn el Hadjar! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In saxosis aridissimis circa Aïn Oumast, et alibi in prov. Shedma!

Ar. Geog. Macaronesia. Marocco meridionali-occidentalis.

Differt a specie habitu procumbente, herba hirsutissima subincana, foliis minoribus; sed characteres graviores satis constantes non video. *L. arenarius* est species valde ludibunda, et formæ intermediæ non desunt. Huc etiam referenda sunt (nisi fallor) specimina nana exilia pauciflora a nobis in distr. Mesfioua lecta. Nomen *dumetorum*, saltem quoad spec. Maroccana, haud aptum, dum hæc varietas semper in arenosis vel saxosis solo arso obvia est.

Legi in umbrosis prope Sheshaoua specimen incompletum forsan ad *L. arenarium* referendum, leguminibus elongatis polyspermis, pedicellis fructiferis omnibus insigniter recurvis, segmentis calycinis paulo longioribus et acutioribus.

LOTUS CRETICUS (*L.*, *DC. Pr.* ii. 211).

Mar. sept.—In arenosis inter Tetuan et Ceuta!

Mar. occid.—Mazagan in arenosis maritimis! Mogador in arenosis!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

L. commutatus (*Guss. Fl. Sic. Prod.* ii. 545),=L. Salzmanni (*Boiss. et Reut. Pug.* 37; *Walp. Ann.* iv. 477).

Mar. sept.—Tanger in rupibus maritimis! Tanger in arenosis (*Salzm. Exsicc.*)! (*Boiss. et Reut. l. c.*). Tanger (*Schsb. Herb.* sub "*L. creticus*") *Coss. spec.*! In rupibus maritimis ad Cap. Spartel!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Africa boreali-occidentalis. Hispania Gaditana. Algarve. Sicilia.

Specimina Sicula non vidi, sed descriptio Gussoniana omnino conformis. Planta Salzmanniana a *L. cretico* differt habitu, caulibus suberectis rigidis basi sublignosis, pedunculis longioribus crassioribus, floribus majoribus pallidioribus. Sistit forsan subspeciem, sed vereor ne in typum per formas intermedias transeat.

L. CYTISOIDES (*DC. Fl. Fr.* et *Prod.* ii. 211, et verisimiliter *L.*),=L. Allionii (*Desr. Journ. Bot.* iii. 77; *Gren. et God. Fl. Fr.* i. 433),=L. creticus, var. cytisoides (*Boiss. Fl. Or.* ii. 165).

Mar. sept.—Tetuan (1851 et 1871)! In monte Beni Hosmar prope Tetuan!

Mar. occid.—? In monte Djebel Hadid haud procul Mogador (*J. D. H.*)!?

Mar. merid.—In convalle Aït Mesan circ. 1300 m.! Prope Ourika (*R. et Fr. spec. in herb. Kew.*)!

Ar. Geog. Species variabilis per totam fere regionem Mediterraneam diffusa. Deest in Macaronesia.

LOTUS MAROCCANUS (*Ball, in Journ. Bot.* 1873, 306).

Radix lignosa, e collo ramosissima, caules adscendentes vel erecti, subæquales; folia breviter petiolata, petiolo compresso insigniter 3-nervi; foliola sessilia, fol. inferiorum obovata, superiorum rhombeo-lanceolata, omnia acuminata; stipulæ conformes; pedunculi terminales, rarius laterales, 1–4-flori, folio florali cæteris conformi suffulti; pedicelli reflexi, articulati; calycis dentes subæquales, subulati, tubo nervis 5 atrovirentibus notato subduplo longiores, sinu rotundato divisi; stylus dentatus; legumen (pro genere) longum, nitidum, torulosum, incurvum; semina viridia, ovoidea.

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In glareosis ad radices Atlantis Majoris frequens. Tasseremout! Ourika! Reraya! Amsmiz! Seksaoua!

Species insignis, nulli proxima. Tota planta, præter legumen, molliter villosa.

L. HISPIDUS (*Desf. Cat. H. Par.* 190; *DC. Pr.* ii. 212), = L. odoratus (*Sims, Bot. Mag.* tab. 1233; *DC. Pr.* ii. 214).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir (*Schsb. Herb.* sub "*L. odoratus*"), *Coss. spec.*!

Ar. Geog. Europa occidentalis. Regio Mediterranea occidentalis (inclusa Macaronesia). Fertur in Græcia, sed deest in Boiss. 'Fl. Orientali.'

Valde affinis *L. angustissimo*, L., et forsan melius sicut hujus subspecies enumerandus.

L. PARVIFLORUS (*Desf. Fl. Atl.* ii. 206; *Seringe, in DC. Pr.* ii. 208, sub *Dorycnio*), = L. microcarpus (*Brot. Fl. Lus.* ii. 219; *Ser. in DC. Pr.* ii. 209, sub *Dorycnio*).

Mar. sept.—Tanger (*Schsb. Herb.* sub "*L. humilis*" et "*L. pilosus*"), *Coss. spec.*! (*Webb Herb.*)!

Mar. occid.—Rabat (*R. et Fr. spec. in herb. Kew.*)! Casa Blanca!

Ar. Geog. Regio mediterranea imprimis occidentalis (inclusa Macaronesia). Deest in Asia Mediterranea.

L. LAMPROCARPUS (*Boiss. Diagn. Pl. Or.* ser. 1, ix. 33; *Walp. Ann.* ii. 356)?

Mar. merid.—Mesfioua in fruticetis juxta torrentem!

Ar. Geog. In Græcia et Asia Mediterranea late diffusa.

Specimina nostra leguminibus omnino immaturis non satis certa. Spec. Heldreichianis ad Phalerum Atticæ lectis bene conveniunt nisi corollis in sicco aurantiacis, nec ut in his virescentibus, et legumine (immaturo) fusco, nec cinereo-nitente.

LOTUS TINGIṬANUS (*Boiss. Diagn. Pl. Or.* ser. 1, ii. 36; *Walp. Rep.* ii. 854).

Mar. sept.—"In arenis Tingidis in Regno Maroccano" (specimen in herb. Pavon, hodie Boissier, a Schousboeo missum), *Boiss. l. c.*

Species ex descript. insignis, floribus solitariis, legumine calycem parum superante, mihi omnino incerta et ditionis nostræ dubia civis.

In herbario b. Schousboe non adest, nec viderunt botanici plurimi qui agrum Tingitanum postea perlustrarunt.

L. TETRAGONOLOBUS (*L.*, *DC. Fl. Fr.* iv. 553), = Tetragonolobus purpureus (*Mœnch, Meth.* 164; *DC. Pr.* ii. 215).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

L. SILIQUOSUS (*L.*, *DC. Pr.* ii. 215, sub *Tetragonolobo*).

Mar. merid.—In umbrosis irrigatis juxta Sheshaoua aliis stirpibus Europæ mediæ adsociata!

Ar. Geog. Europa media. Per regionem Mediterraneam (exclusa Macaronesia) dispersa, sed infrequens.

L. CONJUGATUS (*L.*, *DC. Pr.* ii. 215, sub *Tetragonolobo*).

Mar. sept.—Tanger (*Schsb. Herb.*), *Coss. spec.*!

Ar. Geog. Oriens. Hispania. Ager Tingitanus. Varietas in Sicilia legumine subalato.

SECURIGERA (*DC. Fl. Fr.* iv. 609).

S. CORONILLA (*DC. l. c.* et *Prod.* ii. 313).

Mar. sept.—Tanger!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

Genus *Securigera* inter *Loteas* et *Coronilleas* fere medium tenet. Duce cel. Boissier (Fl. Or. ii. 176) has post *Loteas* enumeravi, et ab *Hedysareis* in serie lineari separavi.

SCORPIURUS (*L. Gen.* 886).

S. SULCATA (*L.*, *DC. Pr.* ii. 308).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (*Webb Herb.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Mesfioua!

Ar. Geog. Regio Mediterranea calidior (inclusa Macaronesia). Abyssinia. Deest in Gallia, Italia, Græcia, et Asia Minore.

Scorpiurus subvillosa (*L., DC. Pr.* ii. 308).
Mar. sept.—Inter Tanger et Tetuan ! Tetuan (1851)!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).
Nimis vicina *S. sulcatæ* et sicut subspecies enumeranda.

S. VERMICULATA (*L., DC. Pr.* ii. 308).
Mar. sept.—Tanger (*Salzm. Exsicc.*)!
Ar. Geog. Regio Mediterranea occidentalis inclusa Macaronesia, sed potius rara. Fertur in Attica (*Sibth.*), et in Tauria (*M. B.*), sed specimina Orientalia Boissier non vidit.

ORNITHOPUS (*L. Gen.* 884).

O. COMPRESSUS (*L., DC. Pr.* ii. 311).
Mar. sept.—Tanger! (*Webb Herb.*)!
Mar. occid.—Rabat (*R. et Fr. spec. in herb. Kew.*)! Casa Blanca!
Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Gallia occidentalis.

O. ISTHMOCARPUS (*Coss. Not. Crit.* 16; *Walp. Ann.* iii. 849).
Mar. sept.—Tanger! (*Webb Herb.*)! In monte Djebel Kebir (*Salzm. Exsicc.*, sub "*O. intermedius*")!
Ar. Geog. Peninsula Iberica. Ager Tingitanus.
Confer Boiss. et Reut. Pug. in Addend. p. 130. Nil dubitandum b. Brotero species duas probe diversas sub *O. sativo* (Fl. Lus. ii. 160) confudisse—scilicet *O. isthmocarpum*, Coss., et *O. roseum*, L. Dufour. Prior distinguitur legumine valde arcuato, inter semina in isthmos elongatos contracto, et in rostrum elongatum uncinatum desinente. *O. sativus* (Gren. et God. Fl. Fr. i. 499, et plurimorum auctorum) est certe idem ac *O. roseus* (L. Duf. Ann. Sc. Nat. ser. 1, v. 84). Hunc, præeunte Seringe in DC. Pr. ii. 312, habeo pro forma majore *O. perpusilli*, L.

O. EBRACTEATUS (*Brot. Fl. Lus.* ii. 159; *DC. Pr.* ii. 311, sub *Astrolobio*).
Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)! In monte Djebel Kebir (*Schsb. Herb.*), *Coss. spec.*! Cap. Spartel!
Ar. Geog. Regio Mediterranea omnis, imprimis occidentalis. Europa occidentalis. In Oriente rarus.

CORONILLA (*L. Gen.* 883).

C. GLAUCA (*L., DC. Pr.* ii. 309).
Mar. sept.—In rupibus montis Beni Hosmar pr. Tetuan florentem legimus!
Ar. Geog. Regio Mediterranea. Deest in Oriente et in Macaronesia.
Specimina nostra stipulis angustis lanceolato-acuminatis certe ad *C. glaucam* referenda. Folia fere omnia apice lata, emarginata, in sinu plerumque mucronata.

CORONILLA PENTAPHYLLA (*Desf. Fl. Atl.* ii. 171; *DC. Pr.* ii. 309).

Mar. merid.—In regione inferiore Atlantis Majoris. Aït Mesan circ. 1300 m.!

Ar. Geog. Africa boreali-occidentalis.

C. pentaphylla C. glaucæ, L., simillima, et nisi stipulurum forma vix dignoscenda, forsan melius sicut subspecies enumeranda.

C. JUNCEA (*L., Lam. Dict.* ii. 121; *DC. Pr.* ii. 309).

Mar. merid.—Ex prov. Ksima attulit Indig. Mardocheus. *Coss. Index.*

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

Forma leguminis in hac specie post Lamarck ab auctoribus vel male descripta vel prætermissa. In multis exemplaribus diligenter scrutatis ego vidi legumina semper verbis Lamarckianis conformia, "Gousses menues, articulées, légèrement comprimées, et munies dans la longueur de deux petits rebords opposés," nec tetragona ut habent Gren. et God. Fl. Fr. i. 496.

C. RAMOSISSIMA (*Ball in Journ. Bot.* 1873, 306).

Suffrutex ramosissimus, 1–2-pedalis; rami substriati; folia brevia, imparipinnata, 2–3-juga, foliolis breviter petiolulatis, crassiusculis, cuneatis, apice truncatis emarginatis, mucronulatis, margine non cartilagineis, infimis cauli approximatis; stipulæ membranaceæ, e basi lata ovato-acuminatæ; pedunculi 7–10-flori, folia longe superantes; flores pro genere parvi; calycis dentes breves, apice interdum ciliolati; vexilli lutei unguis calyce paulo longior; legumen tenue, leviter arcuatum, vix compressum, ex suturis incrassatis insigniter biangulatum.

Mar. merid.—Frequens in regione inferiore Atlantis Majoris. Distr. Reraya 1000–1200 m.! Aït Mesan circ. 1400 m.!

Hanc in Journ. Bot. *l. c.* habui pro subspecie *C. junceæ*, L. Melius observata mihi videtur ab illa probe distincta. Forma foliolorum omnino diversa, et foliola infima ramo approximata (sæpe sessilia), notas graves differentiales in hoc genere suppetunt. His addenda sunt legumina tenuiora longiora minus compressa, et stipulæ majores basi latiores.

C. MINIMA (*L., Vill. Fl. Dauph.* iii. 396, *non DC. Pr.* ii. 309),=C. coronata (*DC. Pr.* ii. 310).

Mar. merid.—In convalle Aït Mesan circ. 1600 m.!

Ar. Geog. Europa media præsertim occidentalis. Hispania. Atlas Major.

C. VIMINALIS (*Salisb. Lond.* 13; *DC. Pr.* ii. 309),=C. pulchra (*Ball in Journ. Bot.* 1873, 307).

E basi suffruticosa rami tenues, flexuosi, herbacei, elongati (inter frutices 9–10-pedales); folia 4–10-juga; foliola petiolulata, ovato-cuneata vel oblongo-elliptica, apice sæpius emarginata, vix mucronulata, inferiora cauli approximata, non amplectentia; stipulæ parvæ, albæ, ovales, obtusæ; flores in pedunculis axillaribus 4–8, magni, colore variabiles, interdum flavescentes, vexillo linea rubra notato, interdum albi vel dilute purpurei, alis saturatioribus; calyx quam in sp. affinibus multo major, campanulatus, dentibus latis brevissimis vel subobsoletis, latere superiore basin versus subinflatus; petala subæqualia, omnia latiora quam in affinibus; legumen longissimum (nondum maturum decimetrum superans), 10–15-articulatum, ex stylo elongato torto persistente eximie rostratum; semina subcylindrica, compressiuscula.

Mar. occid.—Mogador (*Salisb. l. c.*).

Mar. merid.—In regione inferiore et ad radices Atlantis Majoris. Infra Tasseremout inter frutices! Supra Seksaoua in rupibus! Supra Milhain! Aouina prov. Shedma (*Coss. spec.*)!

Ex descriptione nimis incompleta, et pluribus notis incongrua, specimina nostra ad *C. viminalem* non retuli, et pro typo sp. novæ perperam descripsi. Nomen ipsum *viminalis* infaustum, dum rami tenues flexuosi hyeme pereunt, et nisi fruticibus aliove sustentaculo fulcrati breves evadunt. Flores in spec. nostris, ex albo purpurei; in spec. ad Mogador lectis dicuntur flavescentes; confer iconem Salisburianam. Foliola in spec. nostris ad 17, in spec. Mogadorensibus usque 21.

Sec. Salisbury *l. c.* planta ex seminibus facile propagata, in hortis plurimis Anglicis suo tempore culta, serius ut videtur amissa, et hodie paucis cognita.

Pulchra species, decus floræ Maroccanæ, nullæ aliæ valde proxima. *C. grandiflora*, Boiss., quæ floribus æmula, est species herbacea, calyce diverso, et stipulis majoribus ovatis mucronatis, nec parvis ovalibus obtusis, a nostra bene distincta; *C. varia*, L., floribus multo minoribus 12–18 nec 4–8 in pedunculo gaudens, differt insigniter calycis dentibus triangularibus, acuminatis, legumine multo breviore, 4–6-articulato.

In herb. Gouan (hodie Kewensi) exstat specimen unicum *Coronillæ viminalis* cui adjicitur in scheda manu ignota "*Coronilla gibraltarica* de Broussonnet. Ex Horto Barcinonensi, 1797. Affinis *C. variæ* an non eadem?" Semina proculdubio ex agro Mogadorensi a cl. Broussonnet allata, et cum Gibraltaricis commixta.

Coronilla repanda (*Lam. Ill.* tab. 631, et *Dict.* iv. 580; *Poir. Voy.* ii. 215, sub *Ornithopo*; *DC. Pr.* ii. 311, sub *Astrolobio*; *Boiss. Diagn. Pl. Or.* ser. 2, ii. 35),=Ornithopus lotoides (*Viv. ex DC. Pr. loc. cit.*).

Mar. sept.—Prope Cap. Spartel (*Schsb. Herb.*), *Coss. spec.*!

Ar. Geog. Occurrit rarius in regione Mediterranea occidentali.

C. scorpioides (*L.*, sub *Ornithopo*; *M. et K., Deutschl. Fl.* v. 201) = Astrolobium scorpioides (*DC. Pr.* ii. 311).

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in regione inferiore. Mesfioua! Tasseremout (*G. Maw*)! Milhaïn! Aït Mesan circ. 1300 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

HIPPOCREPIS (*L. Gen.* 885).

H. SCABRA (*DC. Pr.* ii. 312).

Mar. merid.—Prope Seksaoua!

Ar. Geog. Hispania. Africa borealis.

Specimina nostra ex legumine nimis immaturo haud certa.

H. scabram genuinam vidi ex Cerro Negro pr. Matritum (Bourg. Pl. Esp. 1854) et ex Djebel Tougourt pr. Batna (Balansa, 1853, No. 924). Cætera specimina quæ vidi a Bourgeau et Reuter sub hoc nomine distributa omnes ad speciem omnino diversam (*H. Salzmanni*) referenda. *H. scabra* est species perennis (erronee in DC. (I) notata), ex pilis brevibus adpressis scabriuscula, et calyce brevi donata.

H. ATLANTICA (*Ball in Journ. Bot.* 1873, 307).

Fruticulus, radice et caulibus lignosis, ramos prostratos foliaceos edens; herba tota pilis albis brevibus vestita; folia 6–10-juga; foliola approximata, petiolulata, obtusissima, fol. infer. apice retusa; stipulæ minutæ, membranaceæ, ovatæ, obtusæ; pedunculi terminales, breves, 3–6-flori; calycis labio superiore apice bidenticulato, inferiore 3-dentato, dentibus subæqualibus; legumen (immaturum) arcuatum, scabrum, sinibus profundis orbicularibus excavatum.

Mar. merid.—In regione alpina Atlantis Majoris. In jugo Tagherot circ. 2700 m.! Fere eodem loco specimen legerunt cl. Rein et Fritsch!

Ab affini *H. scabra*, DC., differt foliis multijugis, foliolis petiolulatis fere obcordatis, pedunculis brevioribus et stipulis obtusis.

H. MULTISILIQUOSA (*L., DC. Pr.* ii. 312).

Mar. merid.—Seksaoua! Tasseremout (*G. Maw*)!?

Ar. Geog. Per regionem Mediterraneam omnem (inclusa Macaronesia) dispersa.

Specimen unicum ex Tasseremout nimis immaturum et ideo incertum.

—— ——, var. MAJOR, = H. minor (*Munby, Fl. de l'Alg.* 80; *Walp. Ann.* i. 245).

Mar. merid.—Ad radices Atlantis Majoris et in planitie. Amsmiz! Mskala! Aït Mesan circ. 1250 m.!

Nomen *H. minor* infaustum; hæc est enim *H. multisiliquosæ* forma major, pedunculis quam folium duplo longioribus, nec folio subæqualibus, legumine sublatiore recto vel parum arcuato, nec insigniter curvato. Inter *H. multisiliquosam* et *H. Salzmanni*, quacum b. Munby (*l. c.* in Add. p. 116) hanc infeliciter conjunxit, locum medium tenet, sed notis gravioribus ad priorem accedit. In spec. Algeriensibus calyces hirsuti, in nostris tantum margine ciliati.

HIPPOCREPIS SALZMANNI (*Boiss. et Reut. Pug.* 42). In Walpers Ann. prætermissa.

Differt a proxima *H. multisiliquosa* statura multo majore, floribus duplo majoribus, legumine sesquilatiore, et præsertim calycis tubo fere duplo longiore dentibus lanceolatis sinu angustiore separatis, nec cuspidato-acuminatis sinu rotundato divisis. Herba subglaberrima pilis raris præsertim in pedunculo adspersa. Stipulæ fere conformes, sed parce nec eximie ciliatæ.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Boiss. et Reut.*) ex *loc. cit.* Prope Cap. Spartel!

Mar. occid.—? Aïn el Hadjar haud procul Mogador! Specimen unicum exile, calycis dentibus quam in typo brevioribus.

Ar. Geog. Hispania Gaditana. Imper. Maroccanum.

PSORALEA (*L. Gen.* 894).

P. BITUMINOSA (*L.*, *DC. Pr.* ii. 219), quacum monente Boiss. conjungendæ sunt *P. palæstina* (Gouan. Ill. 51) et *P. plumosa* (Rchb. Fl. Excurs. 869).

Mar. sept.—Tetuan (*Webb Herb.*, sub *P. palæstina*)!

Mar. merid.—Frequens ad radices Atlantis Majoris. Mesfioua! Tasseremout! Ourika! Mzouda! Seksaoua! In convalle Aït Mesan!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

Specimina nostra inter formam Europæam vulgarem et *P. palæstinam* ambigua.

P. DENTATA (*DC. Pr.* ii. 221),=P. americana (*L. Sp. Pl.* 1075).

Mar. sept.—Vidi specimina prope Tanger lecta, sed notulam perdidi.

—— ——, var. CALYCIBUS VILLOSIS,=P. polystachya (*Poir. Dict. Suppl.* iv. 587) ex *DC. l. c.*

Mar. occid.—Prope Alcazar (*DC. loc. cit.*).

Ar. Geog. Species originis dubiæ, verisimiliter non Americana (nomen igitur Linnæanum delendum); in cultis Hispaniæ australis, Mauritaniæ Tingitanæ et Madeiræ rarius obvia. Olim legi in cultis prope Coronil Hispaniæ Gaditanæ.

Psoralea bracteata (L., DC. Pr. ii. 218), ex agro Mogadorensi a Broussonnet olim allata, est species Capensis, proculdubio cultura introducta, hodie non invenienda.

COLUTEA (*L. Gen.* 880).

C. ARBORESCENS (*L.*, *DC. Pr.* ii. 270).

Mar. sept.—Tetuan (*Webb Herb.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In regione inferiore Atlantis Majoris. Aït Mesan circ. 1250 m.!

Ar. Geog. Europa media calidior. Regio Mediterranea omnis (exclusa Macaronesia).

ASTRAGALUS (*L. Gen.* 892).

Ordinem specierum a cel. Bunge in opere classico "*Astragali Species Gerontogeæ*" stabilitam secutus sum.

A. EPIGLOTTIS (*L., DC. Pr.* ii. 290).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. Herb.*), *Coss. spec.*! Tetuan (*Webb Herb.*)!

Mar. merid.—Ad radices Atlantis Majoris. Tasseremout! Amsmiz! Sektana!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

A. SESAMEUS (*L., DC. Pr.* ii. 288), = A. malacensis (*Salzm. Exsicc.*)

Mar. merid.—In convalle Aït Mesan circ. 1200 m.!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

A. PENTAGLOTTIS (*L., DC. Pr.* ii. 287).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. Herb.*), *Coss. spec.*! Tetuan!

Mar. merid.—Tasseremout (*G. Maw*), spec. benev. communicatum!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

A. HAMOSUS (*L., DC. Pr.* ii. 290).

Mar. sept.—Tanger! (*Webb Herb.*)!

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Ad fines prov. Haha et Shedma (*G. Maw spec.*)!

Ar. Geog. Regio Mediterranea omnia (inclusa Macaronesia).

A. SOLANDRI (*Lowe, in Hook. Journ. Bot.* viii. 294, et *Man. Fl. Mad.* i. 188; *Bge. Astrag.* ii. 16), = A. canescens (*Solander, in Herb. Banks.*; *Buch. Cat.*; *non DC.*).

Mar. occid.—Sat frequens in arenosis prope Mogador!

Ar. Geog. Madeira. Plaga Mogadorensis.

Speciminibus ex insula Madeira a Lowe et Masson lectis bene convenit. Specimina ab Ehrenberg prope Rosetta Ægypti lecta (a cel. Bunge "*A. trimestris,* L." notata) variant a nostris stipulis angustioribus, calycis dentibus brevioribus, legumine minus piloso et seminibus numerosioribus. Nostra planta, *A. hamoso* valde proxima, gaudet dentibus calycinis tubum subæquantibus, stipulis majoribus quam in stirpe Maderensi, superioribus sæpius lanceolatis, inferioribus late ovatis, acuminatis, interdum basi folio opposita coalitis. Legumen tamen ab illo *A. hamosi* semper diversum compressum et dorso late canaliculatum. Ipse cel. Bunge hanc speciem inter sectiones suas *Buceras* et *Harpilobus* mediam esse fatetur, et, pace tanti viri, plane nos docet *Har-*

pilobum sistere sectionem nimis artificialem, melius cum *Bucerate* conjungendam. An *A. Solandri* melius sicut subspecies *A. trimestris* collocandus sit experientia docebit. Mirum est cll. Broussonnet et Schousboe hanc plantam in arena Mogadorensi non invenisse. An serius, casu aliquo—opere hominum vel avium—ex insula Madeira huc allata?

ASTRAGALUS REINII, *nobis*, nov. sp.

Planta caulescens, ramosa, habitu ad § *Onobrychium* accedens; pili simplices basi fixi; folia imparipinnata, 12–15-juga, pilis albis obsita, juniora sericeo-villosa; foliola oblongo-elliptica obtusissima; stipulæ liberæ, cuneato-acuminatæ; pedunculi pauciflori striati rigidi foliis subduplo longiores; calyx subcylindricus, demum ruptus, dentibus lineari-acuminatis tubo dimidium brevioribus instructus; flores . . . . .; legumen breviter pilosum, compressum, arcuatum, dorso anguste canaliculatum, biloculare, sutura dorsali carinatum, ex stylo persistente recurvo apice hamatum.

Mar. merid.—In regione alpina Atlantis Majoris. Ex jugo Tagherot specimen unicum attulerunt cll. Rein et Fritsch hodie in herb. Kew. conservatum!

In sectione *Harpilobo*, Bge., collocandus, ab affinibus differt habitu et legumine valde compresso, dorso anguste canaliculato, parum arcuato, seminibus pro grege paucis, 8–10.

A. BÆTICUS (*L.*, *DC. Pr.* ii. 191).

Mar. sept.—Tanger (*Webb Herb.*)! Djebel Dersa pr. Tetuan (*Webb Herb.*)!

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

A. LUSITANICUS (*Lam. Dict.* i. 312; *Boiss. Fl. Or.* ii. 267),=Phaca Bætica (*L.*, *DC. Pr.* ii. 273),=Erophaca Bætica (*Boiss. Voy. Esp.*).

Mar. sept.—Inter Tetuan et Ceuta! Tetuan (*Webb Herb.*)!

Mar. occid.—Casa Blanca! In monte Djebel Hadid! In eodem monte legerunt R. et Fr. (*spec. in Herb. Kew.*);

Ar. Geog. Regio Mediterranea præsertim calidior, sed non ubique; deest in Italia, Gallia, Hispania boreali et in Macaronesia.

Species ab affinibus valde diversa, a cel. Bunge in opere classico prætermissa, a cel. Boissier in Fl. Orientali, ii. 210, in sectione propria (*Erophaca*) collocata. Specimina omnia quæ ipse legi, et quæ vidi ex monte Djebel Hadid flore et fructu destituta sunt.

A. LANIGERUS (*Desf. Fl. Atl.* ii. 181, tab. 202; *DC. Pr.* ii. 302), var. GLABRESCENS, *nob.*

Mar. occid.—Prope Agadir (*Coll. Indig.* 1871)! Spec. fructifera tantum visa.

Mar. merid.—In saxosis aridissimis prope Aïn Oumast, prov. Shedma!

Ar. Geog. A. lanigerus est species Africæ borealis propria. Fertur in Oriente sed verisimiliter errore antiquorum. Deest in Boissier, Fl. Orientali.

Planta non est acaulis. In var. nostra ramos vel caudiculos plurimos breves e collo radicis emittit; pedunculi dum pluriflori foliorum 6–8-pollicarium longitudinem dimidium superant; stipulæ villosissimæ; foliola 25–35, breviter petiolulata, viridia, subglaberrima; racemus fructifer elongatus; flores brevissime pedicellati; calyx membranaceus demum ruptus, dentibus tubo brevioribus; legumen in statu juniore glaberrimum, maturum parce et breviter pilosum, insigniter rostratum, magis quam in spec. Algeriensibus inflatum. Tam in nostris quam in pluribus spec. Algeriensibus a me scrutatis calycis dentes lanceolati tubi $\frac{2}{3}$ longitudinem attingentes, nec breves cuneati tubi $\frac{1}{4}$ partem vix æquantes, ut in icone Fontanesiana supra citata.

Var. nostra cum var. *subglabrato* (DC. Pr. *l. c.*), ab icone in Buxbaum, Cent. iii. 38, fig. 2, desumpta, non confundenda. Hæc est *A. tragacanthoides* (Willd. Sp. Pl. iii. 1323), planta a cel. Willdenow tantum ex icone cognita, et a stirpe Fontanesiana certe diversa. De hac siluerunt celebb. Bunge et Boissier, et verisimiliter lapsu calami adjecit ill. DC. literas "(v. s.)."

ASTRAGALUS GLAUX (*L., DC. Pr.* ii. 288).

Mar. sept.—Tanger (*Schsb. Herb.*), *Coss. spec.*! (*Salzm. Exsicc.*)!

Mar. merid.—Prov. Shedma pluribus locis!

Ar. Geog. Hispania. Africa boreali-occidentalis. In Gallia australi olim inventa, a recentioribus non visa.

—— ——, var. ROSTRATA, *nob.* Legumine in rostrum conicum sensim attenuato, rostro apice recurvo.

Mar. merid.—In convalle Aït Mesan circ. 1300 m., et iterum supra Arround alt. 2000 m.!

Specimen florigerum nanum prope Mogador lectum forsan ad hanc speciem referendum.

A. ATLANTICUS (*Ball in Journ. Bot.* 1873, 306).

A proximo *A. narbonensi* (Gouan, Ill. 49; DC. Pr. ii. 294), et ab *A. africano* (Bge. Astr. No. 415), differt præsertim structura florum. In sp. nostra carina angustior, sensim, nec abrupte, curvata, alas superans et vexillo subæquilonga, alæ basi profundius auriculatæ. Calycis tubus sesquilongior, molliter villosus, dentibus minus inæqualibus, tubo ipso paulo brevioribus instructus. Bracteolæ duplo longiores quam in *A. narbonensis* spec. Hispanicis. Foliorum rachis et caulis plus minusve patenti-villosa, foliola viridia subglaberrima. Stipulæ lineari-subulatæ villosæ, longiores et angustiores quam in *A. narbonensi*.

Mar. merid.—Legimus florentem in convalle Aït Mesan alt. circ. 1200 m.!

Legumen nondum visum melius docebit affinitatem hujus stirpis speciosæ. Ut mihi videtur simul ac affini *A. africano*, Bge., pro subspecie sub typo *A. narbonensis* habenda est.

Ar. Geog. *A. narbonensis* in Hispania et Gallia australi obvia; *A. africanus* in Algeria; subspecies nostra in Atlante Majore.

ASTRAGALUS OCHROLEUCUS (*Coss. in Ind. Pl. Maroc.*, sine descriptione).

De hac planta a cel. Cosson mox describenda amplius hic referre nolo.

Mar. merid.—Frustulum fructiferum ex regione superiore Atlantis Majoris attulerunt cll. Rein et Fritsch!

A. CHLOROCYANEUS (*Boiss. et Reut. Pug.* 39; *Walp. Ann.* ii. 395).

Mar. sept.—Tanger (*Schsb. Herb.*), *Coss. spec.*! Tetuan!

Ar. Geog. Hispania. Africa boreali-occidentalis.

Ab hoc distinguere nequeo *A. Cossoni* (Bunge, Astrag. ii. 192). Ambo sunt *A. monspessulano*, L., valde proximi, et sicut subspecies (forsan sicut varietates?) enumerandi. Alia forma proxime affinis est *A. monspessulanus*, Desf. non L., cui in scheda (in herb. Kew. conservata) cel. Bunge adjecit "nova sp. *A. monspessulanus* (sensu latiore) per regionem Mediterraneam occidentalem (exclusa Macaronesia) diffusa est, nec deest in calidioribus Europæ mediæ.

A. INCURVUS (*Desf. Fl. Atl.* ii. 182, tab. 203; *DC. Pr.* ii. 204).

Mar. merid.—Legi fructiferum in convalle Aït Mesan circ. 1200 m.!

Ar. Geog. Hispania. Africa borealis.

BISERRULA (*L. Gen.* 893).

B. PELECINUS (*L.*, *DC. Pr.* ii. 307).

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

GLYCYRHIZA (*L. Gen.* 882).

G. FŒTIDA (*Desf. Fl. Atl.* ii. 170, tab. 199; *DC. Pr.* ii. 248).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! El Araisch (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa borealis.

HEDYSARUM (*L. Gen.* 887).

H. CAPITATUM (*Desf. Fl. Atl.* ii. 177; *DC. Pr.* ii. 341, *non Burm.*).

Mar. sept.—Tanger!

Ar. Geog. Regio Mediterranea calidior. Deest in Oriente et in Macaronesia.

H. FLEXUOSUM (*Desf. Fl. Atl.* ii. 176, *an L. Sp. Pl.* 1058? *an DC. Pr.* ii. 341?).

Mar. sept.—Tanger! (*Webb Herb.*)! In collibus inter Tanger et Fondak!

Ar. Geog. Africa boreali-occidentalis. Hispania.

HEDYSARUM MEMBRANACEUM (*Coss. in Bull. Soc. Bot. Fr.* xx. 246). Sequitur descriptio Cossoniana:—

"Planta plus minus pube adpressa sericea, *perennis* inferne *fruticosa*, 1 vel 1½ m. alta, ramosa, laxe dumosa, ramis erectis sæpius confertis indurato-rigidis striato-angulatis. *Folia* petiolata, imparipinnata, 4–7-*juga*, foliolis minutis, supra glabrescentibus, infra pube adpressa subsericeis, oblongis, petiolulatis, margine arefactione sæpius subinvolutis, obtusis, mucronulatis vel subretusis. *Stipulæ* membranaceo-scariosæ, fuscæ, cito evanidæ, *inter se basi et cum petiolo adnatæ. Racemi* axillares 3–4-*flori, laxi, folio sæpius breviores*, floribus, circiter 15 millim. longis, primum erectis dein patulis, pedicellis calycis tubo brevioribus sub calyce minute bibracteolatis bracteolis linearibus fuscis. *Calyx* pube adpressa subsericeus, tubo campanulato, *dentibus* e basi triangulari linearibus *tubo subtriplo brevioribus*, superioribus distantibus. *Corolla* glabra, pallide *lilacino-purpurascens*, marcescens sed fructu maturo decidua, *vexillo* oblongo-obovato *carina vix breviore*, alis oblongis carina triente brevioribus, *carina latere inferiore sensim arcuata.* Stamen vexillare liberum, cætera in vaginam membranaceam superne fissam coalita in quarta parte superiore libera filiformia. *Legumen* 2–4 centim. longum, adpresse et minutissime puberulum, *stipitatum* stipite calyce longiore, bi- triarticulatum sæpe abortu ad articulum unicum reductum, inter articulos angustius, *articulis* 9–12 millim. latis *plano-compressis, disco* oblongo reticulatim nervoso *aculeis destituto*, ad semen tantum convexiusculo, *margine membranaceo latitudinem dimidiam disci excedente.* Semina subreniformia, estrophiolata."

Mar. merid.—Juxta pagum Keira (750 m.) in alluviis et inter segetes legit floriferum et fructiferum Balansa mense Majo 1867. Eodem mense, anno 1871, nos vidimus hanc speciem insignem satis frequentem in glareosis torrentium et alibi ad radices Atlantis Majoris, sed semper alabastris florigeris nondum explicatis.

Monente cel. auctore:—"*H. membranaceum* inter omnes species generis insigne stipularum fabrica, racemis brevibus laxifloris, dentibus calycis brevibus, carina sensim arcuata, leguminibus complanatis latissime membranaceo-marginatis."

ONOBRYCHIS (*Gærtn. Fr.* 318).

O. SATIVA (*Lam. Fl. Fr.* ii. 652; *DC. Pr.* ii. 344),=Hedysarum Onobrychis, *L.*

Mar. sept.—Tanger (*Webb Herb.*)! Specimen incertum fructu carens.

—— ——, var. PSEUDOSUPINA. Caulibus basi procumbentibus adscendentibus, dentibus calycinis tubo ter longioribus, vexillo carina vix longiore.

Mar. sept.—Prope Cap. Spartel!

Ar. Geog. *Onobrychis sativa* per Europam mediam et Asiam temperatam late diffusa, in reg. Mediterranea minus frequenter occurrit. Adsunt tamen formæ affines plurimæ sicut subspecies enumerandæ. In ditione Maroccana videtur admodum rara nec colitur in provinciis a nobis exploratis. Genus omne in Macaronesia deest.

ONOBRYCHIS ERIOPHORA (*Desv. Journ. Bot.* 1814; *DC. Pr.* ii. 345).

Mar. sept.—Tetuan!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

O. CRISTA GALLI (*Lam. Fl. Fr.* ii. 652; *Boiss. Fl. Or.* ii. 528; *non DC. Pr.* ii. 346), = Hedysarum Crista Galli (*L. Syst.* 563; *Sibth. et Sm. Fl. Gr.* tab. 724), = O. trilophocarpa (*Coss. et Dur. in Balansa, Pl. d'Algér.* 1852, no. 351).

Mar. occid.—In prov. Haha haud procul Mogador!

Mar. merid.—Juxta Aïn Oumast, prov. Shedma!

Ar. Geog. Species imprimis Orientalis, per Africam borealem usque littora Oceani diffusa, sed verisimiliter infrequens. Fertur in Italia et in Gallia australi, sed vix spontanea, aut non genuina.

De synonymia hujus speciei confer Boissier (Diagn. Pl. Or. ser. 1, ix. 108), et Cosson (Bull. Soc. Bot. Fr. iv. 17).

EBENUS (*L. Gen.* 895).

E. PINNATA (*Desf. Act. Soc. Hist. Nat. Par.* i. 21, tab. 3; *DC. Pr.* ii. 350).

Mar. occid.—Aïn el Hadjar! Djebel Hadid! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in regione inferiore. Aïn Oumast! Tasseremout! Ourika! Seksaoua! Keira (*Balansa*), *Coss. Index.*

Ar. Geog. Africa boreali-occidentalis.

Ludit plus minusve villosa, pedunculis brevioribus vel longissimis.

VICIA (*L. Gen.* 873).

V. ONOBRYCHOIDES (*L., DC. Pr.* ii. 358).

Mar. merid.—In convalle Aït Mesan circ. 2200 m.!

Ar. Geog. Per Europam australem late diffusa, in convallibus meridionalibus Alpium ultra 1500 m. ascendens, et in calidioribus interdum obvia. Africa boreali-occidentalis.

—— ——, var.? Stipulis linearibus minimis vix 2 millimetra longa, doribus minoribus a *V. onobrychoide* diversa videtur. Desunt legumina.

Mar. merid.—Legimus in ditione Reraya circ. 1100 m.

Planta ulterius inquirenda.

VICIA ELEGANS (*Guss. Prod. Fl. Sic.* ii. 438)?

Mar. merid.—Legi spec. unicum in ditione Mesfioua!

V. elegans, Guss., species mihi non satis nota, ex descriptione et spec. (an authentica?) quæ vidi in grege *V. onobrychoidis* collocanda videtur, et spec. nostro sat bene convenit. In pl. nostra foliola mucronata angustiora quam in *V. onobrychoide*, stipulæ angustiores, cirri magis ramosi, flores æquilongæ sed tenuiores, calycis dentes longiores. Styli barbati nec pubescentes stirpem nostram e grege *V. Craccæ* sejungunt. Cel. Boissier in Fl. Orientali *V. elegantem* ad var. *V. variæ* reduxit, et sp. Gussonianam in grege *V. Craccæ* collocavit.

V. ALTISSIMA (*Desf. Fl. Atl.* ii. 163).

Mar. sept.—Tanger (*Webb Herb.*)!

Ar. Geog. Italia australis cum insulis. Dalmatia. Africa borealis.

V. BIFLORA (*Desf. Fl. Atl.* ii. 166, tab. 197; *DC. Pr.* ii. 360).

Mar. sept.—Inter Tetuan et Ceuta!

Ar. Geog. Africa borealis.

Speciminibus paucifloris *V. pseudocraccæ,* Bert., similis; sed præter alias notas *V. biflora* gaudet stylo apice circumcirca hirsuto, dum in *V. pseudocracca* stylus ad latus inferius apice barbatus.

Planta nostra a typo Fontanesiano paululum variat. Folia glabrescentia, parce pilosa, apice longiuscule cirrata, 3–6-juga; foliola sæpius 10, sæpe alterna, oblongo-elliptica, mucronulata; stipulæ semisagittatæ lobo unilaterali limbum subæquante; pedunculi sæpissime biflori, aristati, foliis fere dimidio breviores; calycis breviter pilosi dentes inæquales, inferiores subulati tubo æquilongi, superiores breves triangulares; vexillum carina paullo longius. Flores in pedunculo rarius 3 vel 1.

V. biflora (Webb, Phyt. Can. tab. 65, B) est species aliena=*V. albicans,* Lowe.

V. GLAUCA (*Presl, Del. Prag.* i. 37; *Moris, Fl. Sard.* i. 565, tab. 60; *Walp. Rep.* i. 713), var. RERAYENSIS (*Ball in Journ. Bot.* 1873, 339).

Primo intuitu a typo parum differt floribus minoribus pallide lilacinis, carina apice atropurpurea. Notas differentiales graviores video in calyce valde inæquali, dentibus inferioribus subulatis tubo longioribus, superioribus vix tubum dimidium æquantibus.

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan a 2400 m. ad 2600 m.! In jugo Tagherot specimen legerunt cll. R. et Fr. hodie in herb. Kew conservatum!

Legumen immaturum pilosiusculum. In spec. ex Sicilia et Algeria video suturam leguminis pilosam.

Legumina in spec. a Tagherot quam in typo paululum latiora. Semina 4–6 ferunt.

Ar. Geog. V. glauca est species Africæ borealis, in Europa nonnisi in insulis Siciliæ et Sardinia detecta.

VICIA ATROPURPUREA (*Desf. Fl. Atl.* ii. 164; *DC. Pr.* ii. 359).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)! Cap. Spartel!

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia); deest in Græcia.

V. DURANDI (*Boiss. Diagn. Pl. Or.* ser. 1, ix. 116; *Walp. Ann.* ii. 398).

Mar. sept.?—"Specimina in Mauritania ad Tingidem legit Durand in herb. Pavon. hodie Boissier."

Dubia civis. Cel. Cosson, qui herbarium proprium Durand sedule compulsit, nec in illo nec in aliis herbariis antiquioribus specimina Maroccana vidit.

?V. LENS (*Coss. et Germ. Fl. Par.*), = Ervum Lens (*L.*, *DC. Pr.* ii. 366).

Colitur prope Tanger et in provinciis meridionalibns, sed nec indigena nec (quod sciam) facta spontanea.

V. ERVIFORMIS (*Boiss. Voy. Esp.* 550), = Ervum vicioides (*Desf. Fl. Atl.* ii. 168, tab. 198; *DC. Pr.* ii. 366).

Mar. sept.—Tetuan ad ostium fluminis (*Webb Herb.*)! Ibidem in calcareis juxta urbem!

Ar. Geog. Africa boreali-occidentalis. Hispania Bætica.

V. PUBESCENS (*DC. Cat. Hort. Monsp.* 109, et *Prod.* ii. 367, sub *Ervo*; *Boiss. Fl. Or.* ii. 596), = Ervum Loiseleurii (*M. B. Fl. Taur. Cauc. Suppl.* 475).

Mar. sept.—Tetuan (*Webb Herb.*)!

Præter indumentum differt a *V. tetrasperma*, cui valde proxima, calycis laciniis duplo longioribus lanceolato-subulatis. Pro subspecie habenda?

Ar. Geog. Hæc est forma meridionalis per reg. Mediterraneam omnem (inclusa Macaronesia) late diffusa.

V. SATIVA (*L.*, *DC. Pr.* ii. 360).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! In lapidosis haud procul Cap. Spartel! Tetuan! In monte Beni Hosmar!

—— ——, var. ANGUSTIFOLIA (*Seringe, in DC. Pr. l. c.*), = V. angustifolia (*Roth, Tent. Fl. Germ.* i. 310).

Mar. merid.—In regione inferiore et subalpina Atlantis Majoris. Aït Mesan alt. 1400 m., et iterum supra Arround circ. 2300 m.!

—— ——, var. ABYSSINICA (*Bak. in Fl. Trop. Afr.* ii. 172), = V. abyssinica (*Alefeld in Bonplandia*).

Mar. merid.—Aït Mesan, alt. 1300 m.!

Speciminibus Schimperianis in herb. Kew. omnino convenit nisi legumine (unico) in nostra planta subtoruloso. Folia, fere ut in *V. lathyroidi*, L., 2–4-juga; stipulæ superiores semisagittatæ dente subulato auctæ, inferiores profunde laciniato-dentatæ, dentibus acutis subulatis; semina fusca, lævia.

Legumina in spec. Schimperianis supra citatis, a planta discreta et chartæ agglutinata, mihi videntur incerta et forsan ex sp. aliena orta.

—— ——, var. CORDATA (*Boiss. Fl. Or.* ii. 575), = V. cordata (*auctorum, an Wulf.?*)

Mar. occid.—Agadir (*Coll. Indig.* 1871)! Casa Blanca (*J. D. H.*)!

Ar. Geog. V. sativa, verisimiliter in regione Mediterranea indigena, est species polymorpha per orbem temperatum veteribus notum late diffusa, et in Americam cum seminibus introducta. Formæ plurimæ ab auctoribus pro speciebus propositæ parum stabiles et varietatibus intermediis connexæ sunt.

VICIA LUTEA (*L., DC. Pr.* ii. 363).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca (*J. D. H.*)!

—— ——, var. HIRTA (*Boiss. Fl. Or.* ii. 570), = V. hirta (*Balb. Miscell. Alt. Pers. Syn.* ii. 308).

Mar. sept.—Inter Tanger et Tetuan! Tetuan (*Webb Herb.*)!

—— ——, var. γ, MURICATA (*Seringe, in DC. Pr. l. c.*), = Vicia vestita (*Boiss. Elench.* 67, et *Voy. Esp.* tab. 57; *Walp. Rep.* i. 717).

Mar. sept.—Tanger (*Webb Herb.*)!

Specimen a me prope Algeciras lectum Reuterianis ex eodem fere loco proveninentibus omnino conforme est. Floribus violaceis et legumine dense vestito var. hæc a typo recedit, sed in stirpe tam ludibunda hæ notæ non gravis momenti. Nomen *muricata* a Seringe allatum haud omnino aptum, sed prioritatis jure gaudet.

—— ——, var. NITIDA, *nobis*.

Flores magni pallide purpurei, legumen, in statu juniore pilis nonnullis basi non tuberculatis adspersum, maturum omnino glabrum. In frustulo a cel. H. fil. prope Sektana lecto, verisimiliter ad plantam nostram referendo, flores ochroleuci fere ut in typo. Stipulæ in spec. ex Agadir minimæ, semina fere nigra, ellipsoidea, compressa.

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sektana!

Var. nostra pluribus notis ad *V. lævigatam* (Sm. E. Bot. tab. 483) accedit. Icon, verisimiliter quoad stipulas falsa, cum nulla planta recentioribus cognita convenit; ex lusu quodam *V. luteæ* in plaga marina prope urbem Weymouth ex regione Mediterranea olim allato, verisimiliter desumpta est.

Ar. Geog. V. lutea est species polymorpha per Europam mediam et regionem Mediterraneam omnem (inclusa Macaronesia) late diffusa.

LATHYRUS (*L. Gen.* 872).

L. LATIFOLIUS (*L., DC. Pr.* ii. 370),
Mar. sept.—Tetuan (*Webb Herb.*)!
Ar. Geog. Europa media et austro-occidentalis.

L. APHACA (*L., DC. Pr.* ii. 372).
Mar. sept.—Tanger!
Mar. merid.—In regione inferiore Atlantis Majoris. Aït Mesan 1300 m.!
Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia).

L. SPHÆRICUS (*Retz. Obs.* iii. 39; *DC. Pr.* ii. 372),=L. angulatus (*L. Herb. et Mant. Sec.* 443, *non Spec. Pl.* 1031).
Mar. merid.—In convalle Aït Mesan 1200–1400 m.!
In speciminibus minoribus cirri ad aristam brevem reducti.
Ar. Geog. Regio Mediterranea omnis, in cultis Europæ mediæ hinc inde obvia.

L. CÆRULESCENS (*Boiss. et Reut. Pug.* 43; *Walp. Ann.* iv. 530).
Mar. sept.—Tanger versus montem Djebel Kebir (*Boiss. et Reut. l. c.*).
Specimina non vidi; notæ diagnosticæ quibus a *L. setifolio* distinguitur mihi videntur nimis leves. Pro subspecie enumerandus?

L. SATIVUS (*L., DC. Pr.* ii. 373), var. AMPHICARPOS, *Coss.*
Mar. sept.—Tanger! (*Schb. Herb.*), *Coss. spec.*!
Hic est forsan *L. amphicarpos* (L. Sp. Pl. 1029; DC. Pr. ii. 373). *L. amphicarpos* (Sibth. et Sm. Fl. Gr. tab. 693) est tamen species diversa (*L. blepharicarpos*, Boiss.), herba hirta, leguminibus ciliatis, et seminibus tuberculatis, facile dignoscenda. Species Linnæana inter hanc et nostram ambigua est et nomen hodie prætermittendum.
Ar. Geog. *L. sativus* per regionem omnem Mediterraneam diffusus est, et in Abyssinia nascitur—an indigenus?

L. FISSUS (*Ball in Journ. Bot.* 1873, 332).
Annuus, nanus, caule debili ramoso, 4-angulato; folia 2–3-juga, cirro simplici munita; stipulæ foliolis dimidio breviores, semisagittatæ; pedunculi uniflori, aristati, foliis æquilongi; calycis dentes subulati, subæquales, tubo 4–5 longiores; flores parvi (jam emarcidi videntur rubelli); legumen dispermum, breviter stipitatum, ovatum acutum, apice obliquo subrostratum.
Mar. merid.—Ad radices Atlantis Majoris—in rupibus apricis supra Seksaoua detexit J. D. H.!
Huic similis sed non affinis est *L. saxatilis* (Vent. et DC. Pr. ii. 380, sub *Orobo*; Vis. Fl. Dalm. iii. 330),=*L. ciliatis*, Guss. In hoc calyx et legumen omnino diversa. Affinitas vera, nisi fallor, cum *L. sativo*.

L. CICERA (*L., DC. Pr.* ii. 373).
Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Misra Ben Kara!

Specimina nostra sistunt formam majorem leguminibus et foliolis longioribus.

Ar. Geog. Europa media in cultis, vix indigenus. Regio omnis Mediterranea (inclusa Macaronesia).

LATHYRUS ANNUUS (*L.*, *DC. Pr.* ii. 373).

Mar. sept.—Tanger! Tetuan (*Webb Herb.*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

L. TINGITANUS (*L.*, *DC. Pr.* ii. 374).

Mar. sept.—Tanger! Tanger et Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea occidentalis. Sardinia. Hispania Bætica. Africa boreali-occidentalis. Macaronesia.

L. CLYMENUM (*L.*, *DC. Pr.* ii. 375), = L. purpureus (*Desf. Ann. Mus.* xii. 56), forma fol. latioribus, = L. tenuifolius (*Desf. Fl. Atl.* ii. 160).

Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)! In monte Djebel Kebir! Prope Cap. Spartel (formæ latifolia et angustifolia)! Tetuan! (*Webb Herb.*)! Inter Tetuan et Ceuta!

Ar. Geog. Per regionem Mediterraneam fere omnem (inclusa Madera), imprimis occidentalem, late diffusus.

L. articulatus (*L.*, *DC. Pr.* ii. 375).

Mar. sept.—Tanger! (*Webb Herb.*)!

Mar. merid.—Distr. Mesfioua haud procul urbe Marocco!

Ar. Geog. Regio Mediterranea occidentalis fere ubique.

Notæ diagnosticæ quibus hic a *L. Clymeno* distinguitur mihi videntur nimis instabiles. Confer Gren. et Godr. Fl. Fr. i. 479, et Lowe, Man. Fl. Mad. i. 216. In *L. articulato* foliola sæpius latiora ex mucrone apiculari prominente videntur cuspidata, sed in forma angustifolia (rarius obvia) foliola omnino ut in *L. Clymeno*. Differentiam inter stylos a Gr. et Godr. indicatam ego frustra quæsivi. Semina *L. Clymeni* a variis auctoribus "ovata truncata," "ovoidea truncata," "compressa," "subgloboso-quadrangula parum compressa" dicuntur, et ea *L. articulati* "multo majora," "magis compressa," "velutina vel subvelutina." Re vera forma et magnitudo seminum variant, et semina *L. articulati* oculo fortiter armato non vere velutina. In speciminibus multis a me scrutatis video semina semper magis compressa. Quoad hili longitudinem hanc video variabilem, a quinta ad octavam partem peripheriæ seminis. Legumina *L. articulati* majora subtorulosa, nervis suturæ dorsali parallelis plus minusve prominentibus, inde interdum canaliculata, interdum plano-carinata. Licet dubitative, pro subspecie proposui.

L. OCHRUS (*L.*, sub *Piso*; *DC. Fl. Fr.* iv. 578, et *Prod.* ii. 375).

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia).

PISUM (*L. Gen.* 870).

P. ELATIUS (*M. Bieb. Fl. Taur.-Cauc.* ii. 151).

Mar. sept.—Tanger (*Webb Herb.*)! An introductum?

Ar. Geog. Per regionem Mediterraneam imprimis orientalem late diffusum. In Gallia occidentali prope Nantes obvium, sed verisimiliter introductum. Deest in Macaronesia.

CERATONIA (*L. Gen.* 1167).

C. SILIQUA (*L., DC. Pr.* ii. 486).

Mar. sept.—Tanger!

Mar. occid.—Mogador (*Lowe Cat.*), verisimiliter culta.

Mar. merid.—Sat frequens in regione inferiore et in convallibus interioribus Atlantis Majoris. In convalle Ourika! Aït Mesan usque 1500 m.!

Ar. Geog. In regione Mediterranea calidiore. In Macaronesia non spontanea.

Alibi semper in maritimis indicatur; in Imp. Maroccano meridionali loca a mare remota non fugit, et fit arbor grandis diametro 3-6-pedali.

Circa Tanger colitur in hortis et fit arbor elata, 40-pedalis et ultra, *Algarobia glandulosa* (Torr. in Ann. Lyc. N. York, ii. tab. 2; Walp. Rep. i. 861, sub *Prosopide*). A cel. auctore dicitur frutex vel arbuscula.

ACACIA (*Willd. Spec. Pl.* 1049).

A. GUMMIFERA (*Willd. Sp. Pl.* iv. 1056; *DC. Pr.* ii. 455),=A. coronillæfolia (*Desf. Cat. Hort. Par.* 207; *DC. loc. cit.*).

Mar. occid.—Prope Mogador (*Brouss.*), *Willd.*

Mar. merid.—Vidimus plerisque locis in regione inferiore, non tamen frequentissime. In prov. Haha et Shedma sat frequens! Legumina matura cel. Cosson habuit et mihi benevole dedit.

Floret verisimiliter mense Augusto, et fructus hieme maturescunt. Mensibus Aprili et Majo vidimus plantam semper flore et fructu carentem. Hæc species, vel alia proxime affinis, colitur in hortis Tingitanis et fit arbor humilis, vix 20-pedalis, sed pl. spontaneam semper vidimus arbusculam, 6–8-pedalem, trunco diametro vix 4-pollicari. *Acaciæ gummiferæ* Africæ borealis inter se valde affines studio accurato carent. Confer Schweinf. in Linn. 1867.

A. FARNESIANA (*L.*, sub *Mimosa*; *Willd. Sp. Pl.* iv. 1083; *DC. Pr.* ii. 461),=Vachellia Farnesiana (*W. et Arn. Fl. Pen. Ind.*).

Mar. merid.—In hortos urbis Marocco introducta et hodie facta subspontanea!

Ar. Geog. Patria incerta: per regiones tropicales et subtropicales late dispersa, sed ubique, ut videtur, cultura introducta.

Albizzia Julibrissin (Willd. et DC. Pr. ii. 469, sub *Acacia*) circa Tanger colitur sed nullibi spontanea. Species est orientalis, in Persia, nec ultra versus occidentem, indigena.

ROSACEÆ (*Juss. Gen.* 334).

PRUNUS (*L. Gen.* 620).

P. DOMESTICA (*L., DC. Pr.* ii. 533).

Mar. merid.—Fructu nondum maturo legimus ineunte Majo in irrigatis juxta Sheshaoua, verisimiliter ab indigenis cultam! Ejusdem speciei formam sylvestrem (?) legimus sine fructu in convalle Ourika circ. 1100 m.!

Ar. Geog. Species orientalis ab antiquo culta et in calidioribus reg. Mediterraneæ interdum facta spontanea.

P. PROSTRATA (*Labill. Dec. Pl. Syr.* iv. tab. 6; *DC. Pr.* ii. 538, sub *Ceraso*),=P. humilis (*Colla, Herb. Ped.* ii. 293).

Mar. merid.—In regione alpina et subalpina Atlantis Majoris. In monte Djebel Tezah a 2200 m. usque 3000 m.! In convalle Aït Mesan et in jugo Tagherot a 2100 m. usque 2900 m.!

Ar. Geog. In montibus excelsis regionis Mediterraneæ calidioris. Deest in Italia continentali, in Pyrenæis et in Macaronesia.

Cel. Boissier distinxit sub "var. *concolor*" formam hujus sp. foliis subtus glaberrimis, utrinque fere concoloribus. In spec. nostris folia ludunt concoloria, vel subtus pallida et in statu juniore tomentosula, vel subtus albo-tomentosa fere ut in *Cotoneastro*.

Folia variant interdum toto circuitu serrulata, interdum basin versus integerrima apice inciso-serrata. Inde *Cerasus incisa* (Boiss. Fl. Or. ii. 648) est species valde dubia, vix notis stabilibus dignoscenda. Valde affines sunt etiam *C. diffusa* (Boiss. et Hausskn. in Fl. Or.) et *C. tortuosa* (Boiss. et Hausskn. eodem loco); sed *Microcerasi* orientales omnes studio ulteriore et observatione in vivo egent.

RUBUS (*L. Gen.* 652).

R. FRUTICOSUS (*L., DC. Pr.* ii. 560), var. DISCOLOR,=R. discolor (*Weihe et Nees, Rub. Germ.* 46, tab. 20).

Mar. sept.—Tanger! (*Webb Herb.*)!

Mar. merid.—Sat frequens ad radices Atlantis Majoris. In convalle Ourika! (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Hæc est forma *R. fruticosi* regionis Mediterraneæ totius solennis.

R. DEBILIS (*Ball in Journ. Bot.* 1873, 332). In § *Dalibarda* collocandus? (Plate XIX.)

Prostratus, ramosissimus, ramis debilibus; folia ovalia crenata, utrinque viridia, integra vel basi lobata, vel ternata foliolis lateralibus petiolulatis lobo terminali multo minoribus; stipulæ filiformes; flores in spec. nostris emarcidi; achenia (infertilia) omnino sicca, apice acuta, stylo caduco.

Mar. merid.—Ad radices Atlantis Majoris. Legimus in convalle Ourika! circ. 1100 m.

Genus Linnæanum *Dalibarda*, a celebb. Benth. et Hook. ad sectionem *Rubi* reductum, in America boreali et meridionali (ad fretum Magellanicum) et Nepalia detectum, etiam Africæ borealis, ut videtur, indigenum est; sed specimina nostra manca observatione ulteriore in loco natali egent.

POTENTILLA (*L. Gen.* 634).

P. REPTANS (*L., DC. Pr.* ii. 574).

Mar. merid.—In umbrosis irrigatis regionis inferioris et ad radices Atlantis Majoris. Sheshaoua! Amsmiz! Reraya circ. 1200 m.! Keira!

Ar. Geog. Europa omnis (excl. arctica). Asia temperata. Regio omnis Mediterranea (inclusa Macaronesia). Abyssinia.

In spec. nostris folia brevius petiolata quam in Europæis.

AGRIMONIA (*L. Gen.* 607).

A. ODORATA (*Mill. Dict.* No. 3; *DC. Pr.* ii. 587).

Mar. sept.—Tanger! Tetuan (*J. D. H.*)!

Ar. Geog. Per Europam mediam et australem hinc inde obvia. Specimina Africana (exceptis Maroccanis) non vidi.

Characteres videntur satis stabiles; sed hæc certe proles *A. Eupatoriæ* et melius sicut subspecies enumeranda.

POTERIUM (*L. Gen.* 1069).

P. SANGUISORBA (*L., DC. Pr.* ii. 594; *Boiss. Fl. Or.* ii. 783), = P. dictyocarpum (*Spach, Ann. Sc. Nat.* ser. 3, v. 34; *Walp. Ann.* i. 283).

Mar. merid.—In convalle Aït Mesan alt. 1600 m.! (*R. et Fr. spec. in Herb. Kew.*)! Achenia margine valde prominente subalata.

Ar. Geog. Europa omnis (exclusa arctica). Asia temperata. Montes regionis Mediterraneæ (exclusa Macaronesia).

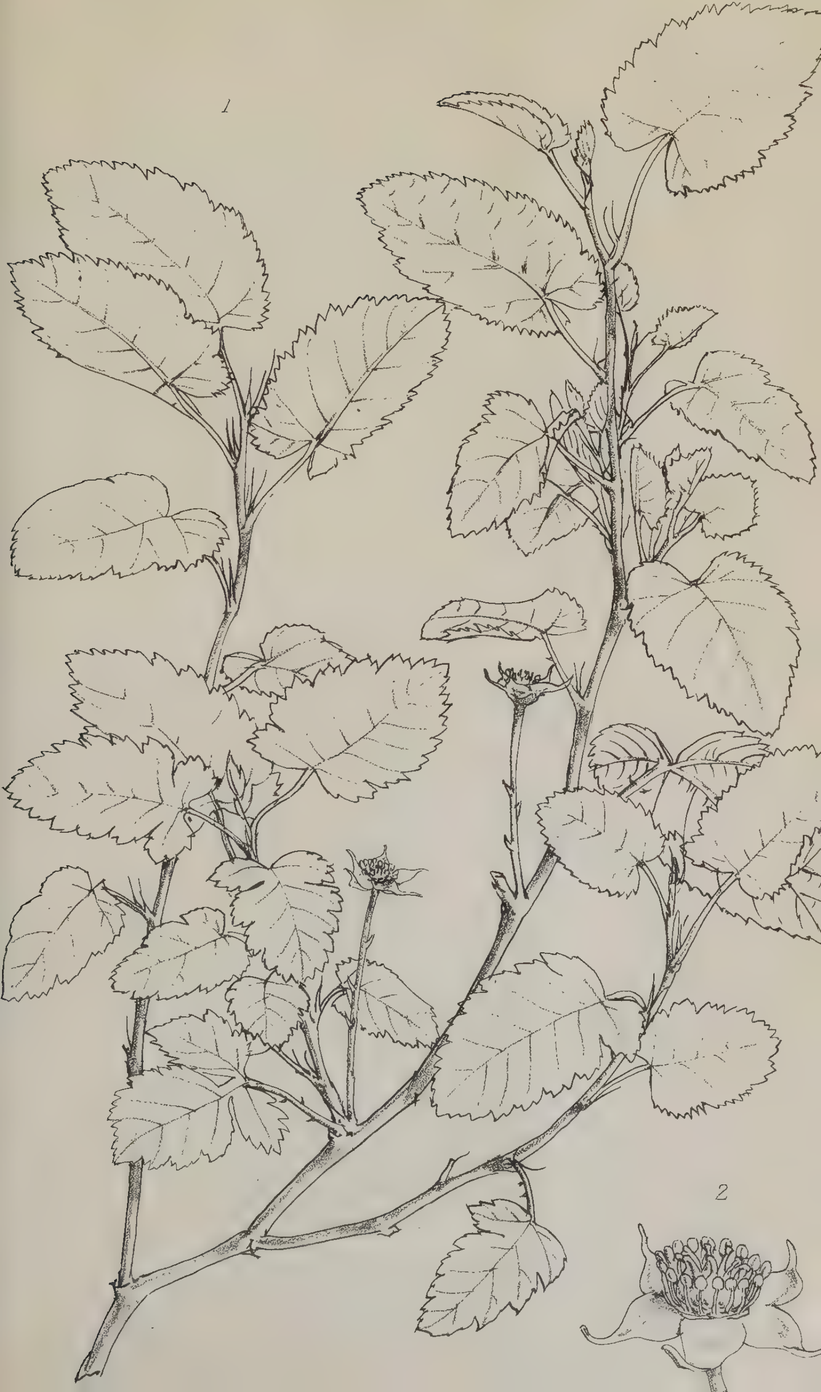
P. VERRUCOSUM (*Ehrenb. Cat. Pl. Hort. Berol.* 1829; *Spach, loc. cit.* 39; *Walp. Ann.* i. 284), = P. mauritanicum α (*Boiss. in Kel. Fl. Calp.* 219).

Mar. sept.—Tanger!

Mar. merid.—Tasseremout! Seksaoua!

—— —— β, MAGNOLII = P. Magnolii (*Spach, l. c* 38; *Walp. Ann.* i. 284), = P. mauritanicum β (*Boiss. in Kel. Fl. Calp. l. c.*).

Mar. sept.—Tanger!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Mar. occid.—Casa Blanca! forma intermedia, fere *P. alveolosum* (Spach, *l. c.* 38; Walp. *l. c.* 284). Aïn el Hadjar haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In convalle Aït Mesan!

Ar. Geog. Species verisimiliter per totam regionem Mediterraneam diffusa.

Hæc species, miro modo ludibunda, in multas s. d. species ab auctoribus recentioribus dilaniata, variat insigniter indumento, habitu, statura, quinetiam fructu tetragono majori vel minori, sphærico, vel ovali, vel obovato, angulis cristatis, vel tuberculatis, vel subobsoletis, faciebus verrucosis, tuberculis obtusis vel acutiusculis. Speciminibus permultis scrutatis formas intermedias tantas vidi ut vix varietates, ne dicam species diversas, sistere videntur. *Sanguisorba mauritanica* (Desf. Fl. Atl. ii. 142) est species incerta, teste Spach, ex *P. Fontanesii*, Spach, et *P. verrucoso*, Ehrnb., composita; nomen igitur non conservandum.

POTERIUM MULTICAULE (*Boiss. et Reut. Pug.* 44; *Walp. Ann.* iv. 665).

Mar. sept.—In monte Djebel Kebir prope Tanger! (*Boiss. et Reut. l. c.*). Juxta Cap. Spartel! In monte Beni Hosmar prope Tetuan!

Habitu ad *P. ancistroides*, fructu ad *P. verrucosum* accedit, sed hucusque formas intermedias non vidi, et, licet dubitative, pro specie probe distincta enumeravi.

Ar. Geog. Hispania Bætica. Ditio Tingitana.

P. ANCEPS (*Ball in Journ. Bot.* 1872, 332).

Perenne, multicaule, ramulis foliaceis; folia radicalia in pagina inferiore caulina sæpius utrinque sericeo-villosa; capitula parva globosa; achenia pulverulento-tomentosa, ancipitia, ad angulos laterales alata, ad anteriorem et posteriorem costis subobsoletis vix prominentibus prædita.

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan supra Arround alt. 2500 m.! In monte Djebel Tezah 2500–2600 m.!

Invito animo novam proposui speciem in hoc genere speciebus incertis nimis onusto; sed achenia in speciminibus nostris ab omnibus mihi cognitis prorsus diversa. Habitu ad *P. ancistroides* paululum accedit, sed, præter alias notas, ramulis foliaceis et foliis sericeo-villosis insigniter differt.

P. ANCISTROIDES (*Desf. Fl. Atl.* ii. 346, tab. 251; *DC. Pr.* ii.).

Mar. merid.—In convalle Amsmiz in rupibus apricis, alt. 1400 m.!

Ar. Geog. Africa boreali-occidentalis. Hispania.

Spec. nostra Algeriensibus (prope Oran lectis) multo minora; sed achenia conformia, ex angulis subobsoletis fere fusiformia, faciebus insigniter reticulato-rugosa.

POTERIUM, sp., an P. DURIÆI (*Spach, loc. cit.* 33; *Walp. Ann.* i. 282)?

Mar. merid.—In rupibus aridis supra Milhaïn!

Specimen unicum legi Majo decedente fructu maturo jam amisso. Folia elongata, foliolis paucis remotis petiolulatis profunde inciso-dentatis; caulis bipedalis, tetragonus, ramosus, ramis tenuibus parce foliatis. Capitula terminalia.

ROSA (*L. Gen.* 631).

R. SEMPERVIRENS (*L., DC. Pr.* ii. 597).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Tetuan!

Mar. merid.—Prope Tasseremout! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea, imprimis occidentalis. Deest in Asia Mediterranea et in Macaronesia.

Sec. cel. Crepin, qui *Rosas* nostras adnotationibus pretiosis ornavit, spec. a Tassseremout sistunt formam cui botanici recentiores nomen *R. scandens* imposuerunt.

R. CANINA (*L., DC. Pr.* ii. 613).

Mar. merid.—Tasseremout! Verisimiliter huc referendum spec. prope Sektana a cll. Rein et Fritsch lectum in herb. Kew. conservatum!

Ar. Geog. Europa omnis (exclusa arctica). Asia temperata. Regio omnis Mediterranea (inclusa Macaronesia).

—— ——, var. SUBINERMIS, *nob.*

Mar. merid.—In convalle Aït Mesan 1200–1500 m.! et forsan huc spec. incompleta in convalle Amsmiz lecta!

Rami floriferi sæpissime (non semper) subinermes. Legimus florentem et in eadem planta fructus maturos segmentis calycinis jam amissis.

De hac stirpe scripsit cel. Crepin:—"Probablement une forme du *canina*, mais si les sépales se relèvent sur le fruit, je la classerais parmi les *Montanæ* comme *R. Reuteri*, var., ce qui après tout n'est qu'une forme du *R. canina*. Celle-ci ressemble extrêmement à une espèce suisse, *R. exannata*."

R. MICRANTHA (*Sm. Eng. Bot.* tab. 2490; *Boiss. Fl. Or.* ii. 687),=R. rubiginosa, var. π, micrantha (*DC. Pr.* ii. 617).

Mar. sept.—Tanger (*Webb Herb.*, sub "*R. rubiginosa*")!

—— ——, var. ATLANTICA, *nob.* Rami antiquiores steriles, aculeis aduncis basi latis conformibus armati, juniores subinermes, vel omnino inermes, glaberrimi; foliola minute duplicato-serrata, subtus parce pilosa glandulosa; rachis foliorum et pedunculi glandulis stipitatis crebris, et aciculis paucis obsiti.

Mar. merid.—Mesfioua! Amsmiz!

Ar. Geog. R. micrantha per Europam mediam occidentalem diffusa, in regione Mediterranea videtur perrara. Specimina nulla vidi.

Rosa Seraphini (*Viv. Fl. Cors. Sp. Nov.* 8; *DC. Pr.* ii. 625),=R. sicula (*Tratt. Ros.* ii. 68; *DC. Pr.* ii. 624),=R. sicula, var. Serafini (*Wallr.*).

Mar. merid.—In regione subalpina et alpina Atlantis Majoris haud infrequens. In convalle Aït Mesan, supra Arround, circ. 2500 m.! In monte Djebel Tezah 3000 m. et ultra!

Hæc species cum *R. micrantha* a cel. Grenier et Godron sicut varietates *R. graveolentis*, Gr. et Godr., enumerantur. *R. Seraphini* in Apennino Italiæ mediæ mihi sæpe obvia, statura nana, aculeis creberrimis et pedunculis glabris a *R. micrantha* videtur satis diversa, nec transitum observavi.

Pyrus (*L. Gen.* 626).

P. Cydonia (*L.*, *Benth. et H. f. Gen. Pl.* i. 626),=Cydonia vulgaris (*Pers. Syn.* ii. 40; *DC. Pr.* ii. 638).

Mar. sept.—Prope Tanger in fruticetis et dumetis!

Ar. Geog. Regio Mediterranea; in Oriente certe indigena, etiam in Europæ australis locis montosis, a cultura remotis, sæpe obvia, et verisimiliter indigena.

Cratægus (*L. Gen.* 622).

C. oxyacantha (*L.*, *DC. Pr.* ii. 628).

Mar. sept.—Prope Tanger in monte Djebel Kebir! El Araisch (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Europa fere omnis (exclusa arctica). Asia temperata. Regio Mediterranea omnis (exclusa Macaronesia).

—— ——, var. **foliis obovato-cuneatis.**

Mar. sept.—Inter Tanger et Tetuan!

Stirps aspectu singulari. Folia circuitu obovata, basi cuneata, apice inciso-dentata, inferiora subtriloba; pedunculi glaberrimi; fructus biovulatus. In eodem corymbo fructus maturi, flores petalis expansis, et nondum expansi semel crescunt.

Saxifrageæ (*Juss. Gen.* 235).

Saxifraga (*L. Gen.* 559).

S. globulifera (*Desf. Fl. Atl.* i. 342, tab. 96; *DC. Pr.* iv. 31), var. **gibraltarica** (*Seringe, in DC. Pr. l. c.*),=S. gibraltarica (*Boiss. et Reut. Pug.* 47).

Mar. merid.—In regione media et superiore Atlantis Majoris. In convalle Aït Mesan circ. 1500 m., et iterum supra Arround alt. 2400 m.! In convalle Amsmiz circa 1700 m.! In monte Djebel Tezah usque 3000 m.!

Ar. Geog. Africa boreali-occidentalis. Hispania australis.

Notæ differentiales quibus *S. gibraltarica*, B. et R., et *S. granatensis*, B. et R., dignoscuntur videntur omnino fallaces. Specimina Hispanica ex locis diversis provenientia inter se plus minusve differre fatendum est; hæc tamen in varietates, ne dicam species diversas, separare non potui. Nota diagnostica ex gemmis elongatis acutis axillaribus substipitatis, vel ovatis obtusis terminalibus sessilibus, omnino incerta. Vidi gemmas utrasque in surculis sterilibus unius ejusdemque plantæ. Planta Algeriensis sæpissime gaudet foliis majoribus glabrioribus longius petiolatis, et calycis segmentis angustioribus, sed non desunt specimina *S. granatensi*, B. et R., omnino conformia, gemmis sessilibus terminalibus. Botanicis quibus placet *S. oranensem*, Munby, *S. granatensem* et *S. gibraltaricam* pro speciebus rite distinctas vindicare, *S. globulifera*, Dsf., plane evadit, et nec in herbariis nec in rerum natura ultro invenienda est.

Saxifraga Maweana (*Baker in Gard. Chron.* 1871, p. 1355).

Cæspitosa, multicaulis, basin versus vestigiis foliorum emarcidorum vestita; surculi florigeri erecti, superne subaphylli, basin versus gemmas axillares stipitatas gerentes; folia inferiora longiuscule petiolata, basi subcordata, triloba, lobo medio integro vel tridentato, lateralibus inciso-dentatis, caulina bracteiformia lineari-oblonga; flores breviter pedicellati, laxe paniculati, panicula sæpius pauciflora; calycis segmenta oblongo-ovata, obtusiuscula, tubo longiora; petala magna 8–9-linearia. Pedicelli et calyx basin versus parce glanduloso-pilosi, cæterum herba tota glaberrima. Styli erecti, non divergentes, longiusculi, petalis paulo breviores.

Mar. sept.—In monte Beni Hosmar legerunt P. B. Webb anno 1827, et G. Maw anno 1869; iterum a nobis lecta anno 1871! Vidi specimina in herb. Webb sub *S. globulifera*, Dsf.

Ex descriptione valde proxima *S. globuliferæ*, sed facie valde diversa. Floribus magnis speciosis *S. granulatæ* æmula, *S. maderensi*, Don, subsimilis. Hæc autem differt herba viscidula, calycis segmentis acutis, foliis magis divisis, caule foliaceo, et stylis divergentibus.

S. TRIDACTYLITES (*L., DC. Pr.* iv. 35).

Mar. sept.—Tetuan! In monte Beni Hosmar!

Mar. merid.—In convalle Aït Mesan supra Arround alt. 2400 m.!

Ar. Geog. Europa fere omnis (inclusa arctica). Regio omnis Mediterranea (exclusa Macaronesia).

S. GRANULATA (*L., DC. Pr.* iv. 35).

Mar. sept.—In vertice montis Beni Hosmar prope Tetuan!

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan circ. 2300 m.! In monte Djebel Tezah 2200–2400 m.!

Ar. Geog. Europa fere omnis. Africa borealis. Montes Asiæ mediæ.

S. granulata est species polymorpha in varietates bene definitas haud facile distinguenda; sed a botanicis in species plurimas instabiles dilaniata. Specimina nostra Atlantica spec. in mont. Himalaya a celeb. J. D. Hooker lectis fere exacte conformia sunt.

S. paniculata, Cav. (sec. specimina Willkommiana), *S. bulbosa*, Hochst., *S. glaucescens*, Reut., quinetiam *S. græca*, Boiss. et Held., et *S. elegantula*, Boiss. MSS., omnes ad typum reducendæ videntur. *S. corsica*, Gren. et Godr., paululum magis differt, sed inter hanc et typum transitum præbent specimina Hispanica ex Sierra de Alcoy (*S. granulata*, var. *ramosissima*, Coss.,=*S. Cossoniana*, Boiss. et Reut. Diagn. Pl. Or.).

S. Arundana, Boiss., cum var. *carpetana*,=*S. carpetana*, Boiss. et Reut., sistit speciem inter *S. granulatam* et *S. bulbiferam* collocandam.

RIBES (*L. Gen.* 281).

R. GROSSULARIA (*L.*, *Boiss. Fl. Or.* ii. 845),=R. Uva crispa (*L.*, *DC. Pr.* iii. 478), var. ATLANTICA, *nob.* Ovario glaberrimo, calycis segmentis pilosis erectis, non reflexis.

Mar. merid.—In regione subalpina et alpina Atlantis Majoris. In convalle Aït Mesan circ. 2000 m. et ultra! In vertice montis Djebel Tezah ultra 3200 m.!

Planta Atlantica ad formam *spinosissimam* auct. accedit, sed ovario glabro et calyce erecto insigniter diversa est. Folia parva in pagina inferiore eximie nervosa, tomentosula, superne glabra. Specimina paulo infra summum verticem montis Djebel Tezah lecta omnino prostrata, ramis subpedalibus, foliis profundius divisis insignia, sed notis gravioribus non diversa. Fructus in convalle Aït Mesan glaberrimus, vel demum setis paucis glandulosis adspersus.

Ar. Geog. R. grossularia, per Europam mediam (exclusa arctica) diffusa, habitat etiam in montibus regionis Mediterraneæ. Deest in Macaronesia et in montibus Hispaniæ meridionalis. Forma arcte affinis in Sibiria Altaica.

CRASSULACEÆ (*DC. Bull. Philom.* 1801, p. 1).

TILLÆA (*L. Gen.* 177).

T. MUSCOSA (*L.*, *DC. Pr.* iii. 381).

Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)!

Ar. Geog. Europa media. Regio Mediterranea fere omnis (inclusa Macaronesia). In Asia Mediterranea nondum detecta, sed forma affinis (subspecies?) *T. trichopoda*, Fenzl, locum tenet.

COTYLEDON (*L. Gen.* 578).

C. UMBILICUS (*Sm. Eng. Bot.* tab. 325),=Umbilicus pendulinus (*DC. Pl. Grass.* et *Prod.* iii. 400).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Djebel Kebir! In clivo maritimo haud procul Cap. Spartel!

Ar. Geog. Europa occidentalis. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia).

Planta occidentalis refert *C. umbilicum*, var. β (L. Sp. Pl. 615); varietas *a*, L. *l. c.*, ad speciem orientalem (*C. erectum*, DC.) spectat.

—— ——, var. HORIZONTALIS (*Lowe, Man. Fl. Mad.* i. 323),=C. horizontalis (*Guss. Ind. Sem. Hort. Pan.* 1826, 4; *DC. Pr.* iii. 400, sub *Umbilico*).

Mar. sept.—Tanger! (*Webb. Herb.*)! (*Schsb. Herb.* inter radices plantæ alienæ a cel. Cosson comm.)! (*Boiss. et Reut.* sub *Umbilico gaditano*).

Mar. occid.—Casa Blanca! Mogador (*Lowe*). In monte Djebel Hadid! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In aridissimis regionis inferioris et in regione inferiore Atlantis Majoris usque 1800 m. Aïn Oumast, prov. Shedma! Mesfioua haud procul urbe Marocco! Aït Mesan! In monte Djebel Tezah circ. 1800 m.!

Ar. Geog. Prædiligit regionem Mediterraneam occidentalem a Sicilia usque in insulam Maderam, nec deest in Oriente.

Formæ extremæ *C. umbilici* et *C. horizontalis* satis diversæ videntur; vidi tamen seriem formarum intermediarum, et stirpem Gussonianam velut subspeciem enumerare non potui. Specimina *C. umbilici* prope Cap. Spartel lecta et *C. horizontalis* ab Agadir allata vix distinguenda.

Umbilicus gaditanus (Boiss. et Reut. Pug. 45) est species pessima, notis instabilibus et levis momenti fulcrata.

COTYLEDON MUCIZONIA (*Ortega, De Nov. Stirp. Cotyled.* 1772),=C. hispida (*Lam. Dict.* ii. 141; *Desf. Fl. Atl.* i. 359),=Umbilicus hispidus (*DC. Pr.* iii. 399).

Mar. occid.—Mogador (*Lowe*).

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Teneriffa (ex spec. in herb. Candolleano)? sed dubia civis, dum cl. Broussonnet plantas patriæ diversæ haud raro semel miscuit.

Nomen antiquius, lege prioritatis coactus, invitus restitui.

C. HISPANICA (*L., Benth. et H. f. Gen. Pl.* i. 659),=Pistorinia hispanica (*DC. Pr.* iii. 399).

Mar. merid.—In collibus aridissimis inter Aïn Oumast et Sheshaoua (lusus corollis læte flavis, tubo demum vix rubescente)! Distr. Mesfioua (forma corollis brevioribus ochroleucis, tubo demum pallide rubescente)!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

C. hispanica est species summopere ludibunda. Qui specimina typica cum *Pistorinia Salzmanni*, Boiss., comparabit hanc pro specie omnino diversa certe habebit; sed inter eas tot et tantæ adsunt formæ intermediæ ut limites certos frustra quæret. Specimina Hispanica typica gaudent corolla rubella vel purpurea, tubo cylindrico, longitudine non valde variabili, limbo patente; dum specimina nostra Maroccana exhibent corollam flavam vel pallide ochroleucam, tubo superne paululum et vix ampliato, inter plantas simul crescentes longitudine ratione

2 ad 3 diverso, limbo subpatulo vel erectiusculo, folia ut in typo brevia tenuia. Specimina *P. Salzmanni* prope Algeciras lecta habent corollam flavovirentem tubo fauce valde ampliato, limbo subpatulo vel erecto, folia multo majora et crassiora. In speciminibus Tingitanis *P. Salzmanni* corolla initio pallide rubella fit rubro-purpurea et tubus minus dilatatus. Denique subspecies nostra *C. Cossoniana* ex notis infra indicatis videtur omnino diversa; vereor tamen ne formis intermediis hæc quoque in typum redeat.

—— ——, var. SALZMANNI, *nob.*, = Pistorinia Salzmanni (*Boiss. Voy. Esp.* tab. 63, B), = P. breviflora (*Boiss. Elench.* 74, *non Coss.*), = P. intermedia (*Boiss. et Reut. Diagn. Pl. Or.* ser. 2, ii. 60), forma corolla longiore.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Ar. Geog. Hispania. Africa boreali-occidentalis.

In spec. Tingitanis corollæ tubus longitudine variabilis, dum longiores sistunt *P. intermediam*, B. et R.

Cotyledon Cossoniana (*Ball in Journ. Bot.* 1873, 332), = Pistorinia brachyantha (*Coss. Index, in Bull. Soc. Bot. Fr.* 1875, 18), = P. breviflora (*Coss. in Bull. Soc. Bot. Fr.* xx. 247, *non Boiss. Elench.* 74).

Descriptio Cossoniana *l. c.* exactissima quoad plantam Mogadorensem; sed *Pistorinias* vix duas invenies locis diversis enatas inter se conformes. Specimina nostra, sicut fit in *C. hispanica*, valde ludibunda, sed sequentibus notis dignoscenda.

Planta pumila, glanduloso-viscida; inflorescentia cymoso-corymbosa; pedunculi tenues, sæpius longiusculi; calycis segmenta quam in *C. hispanica* duplo longiora, lanceolato-attenuata, apice interdum subulata, tubi corollini dimidiam vel tertiam partem attingentia; corolla parva, pallide vel rarius saturate purpurea, subcampanulata, ad tertiam vel dimidiam partem usque fissa, lobis erectiusculis ovatis vel oblongis apice cuspidatis, tubo abbreviato; stamina corollæ subæqualia. Huc, nisi fallor, referenda sunt spec. Algeriensia ad Oued Sidi el Kebir prope Blidah lecta, a cel. Cosson *P. Salzmanni* nominata.

Mar. occid.—Casa Blanca! Mazagan! Aïn el Hadjar! Mogador!

Mar. merid.—In prov. Shedma!

Pro specie omnino distincta habuerim nisi vidissem specimina ex Casa Blanca pluribus notis ad *C. hispanicam* accedentia.

Cel. Cosson nos monet hanc esse inter *Pistoriniam* et *Umbilicum* auct. forma corollæ intermediam, et confirmavit sententiam cell. Bentham et Hooker, qui hæc ad genus Linnæanum *Cotyledon* revocarunt.

SEDUM (*L. Gen.* 579).

S. RUBENS (*L.*, sub *Crassula*; *DC. Pr.* iii. 405).

Mar. sept.—In monte Beni Hosmar prope Tetuan exemplar unicum legi!

Ar. Geog. Europa media. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). Deest in Asia Mediterranea.

SEDUM CÆSPITOSUM (*Cavan. Icon.* tab. 69, sub *Crassula*; *DC. Pr.* iii. 405).

Mar. occid.—Casa Blanca!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

S. MODESTUM (*Ball in Journ. Bot.* 1873, 333). (Plate XX.)

Annuum, nanum; caulis inferne nudus, glaberrimus; folia pauca, plana, late spathulata, approximata, glaberrima; rami florigeri axillares et terminales, hirtuli; cyma depauperata, subaphylla; flores hexameri vel heptameri; sepala cum pedicellis ex pilis simplicibus hirtula, ad tertiam partem usque coalita; petala oblongo-lanceolata, acuminata. pallide albo-rubentia, nervo prominulo dorso pilifero sæpius apiculata semina minutissima.

Mar. merid.—In fissuris saxorum et ad radices arborum in regione inferiore et media Atlantis Majoris. Legimus in convallibus Ourika! et Aït Mesan! et in monte Djebel Tezah! a 1100 m. ad 1900 m.! Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Species distinctissima cui proximum, sed longo intervallo, foret *S. alsinifolium*, All.

S. DASYPHYLLUM (*L., DC. Pr.* iii. 406).

Mar. merid.—(*R. et Fr. spec. in Hort. Kew.*)!

Ar. Geog. Europa media. Regio Mediterranea imprimis occidentalis. Deest in Asia Mediterranea et in Macaronesia.

—— ——, var. OBLONGIFOLIUM, *nob.* Foliis oblongis nec breviter obovatis insigne. Planta spontanea nitida glaberrima in Horto Kewensi culta glandulas paucas in pedicellis ostendit.

Mar. sept.— In monte Beni Hosmar prope Tetuan!

—— ——, var. GLANDULIFERUM, *Moris*,=S. glanduliferum (*Guss. Prod. Fl. Sic.* i. 519).

Mar. sept.—In monte Beni Hosmar prope Tetuan (nondum florens)!

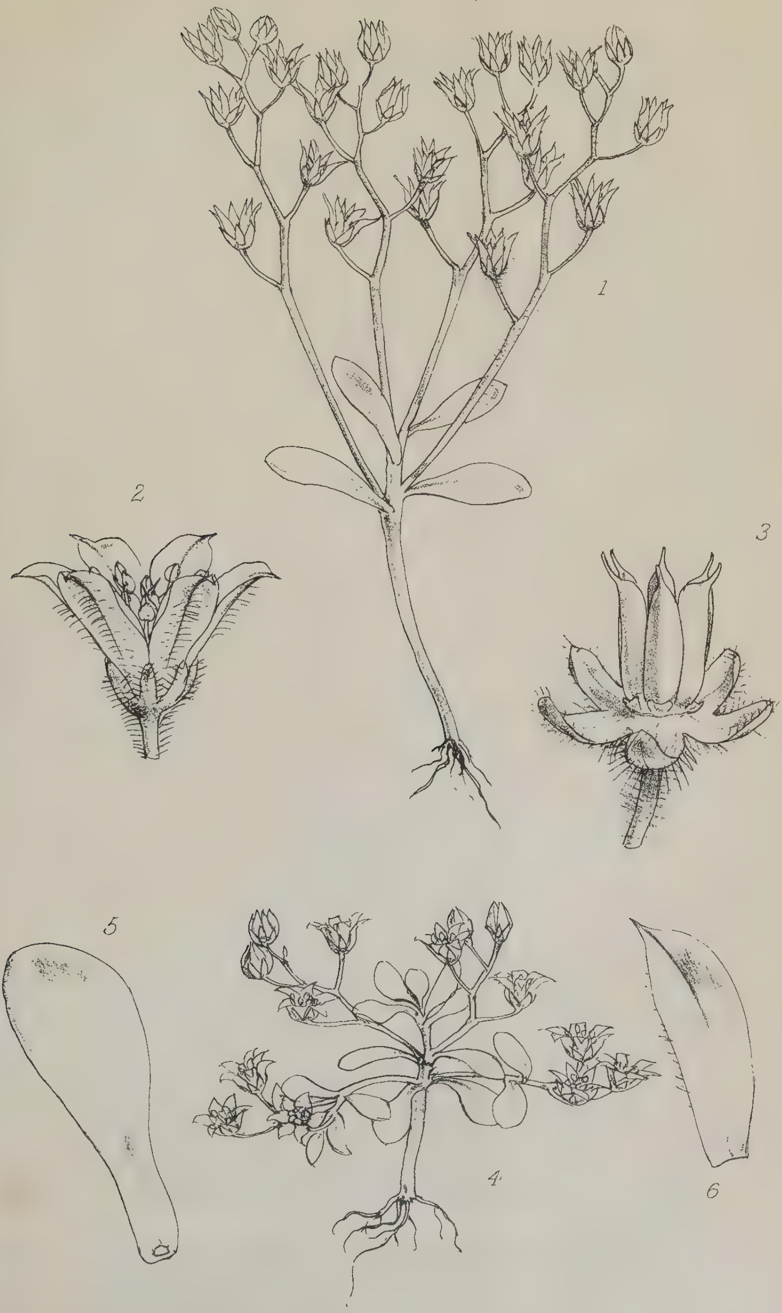
Mar. merid.—Frequens in regione inferiore ad radices Atlantis Majoris, et rarius occurrit in convallibus interioribus. Seksaoua! Milhaïn! Mzouda (*J. D. H.*)! In convalle Amsmiz alt. 1400 m.! In convalle Aït Mesan circ. 2000 m.!

Ab hoc vix differt *S. corsicum*, Duby.

S. BREVIFOLIUM (*DC. Rapp. Voy.* 1808, et *Prod.* iii. 406), var. INDURATUM, *Coss.*,=S. nudum (*Schousb. Herb.*; *non Ait.*),=S. turgidum, (*Salzm. Exsicc. Cors.*; *non Urv. Enum.*).

Mar. sept.—Tanger in rupibus (*Webb Herb.*)! Djebel Kebir (*Schsb. Herb., ex Coss. spec.*)! Prope Cap. Spartel!

Ar. Geog. Gallia. Hispania. Corsica. Ager Tingitanus.



W.H.Fitch lith. SEDUM MODESTUM, *Ball.* Fitch imp.

SEDUM ALBUM (*L.*, *DC. Pr.* iii. 406).

Mar. merid.—Prov. Haha alt. 750 m. (*Balansa*), *Coss. Index.*

Ar. Geog. Europa fere omnis (exclusa arctica). Asia temperata. Regio Mediterranea omnis (exclusa Macaronesia).

—— —— β, MICRANTHUM (*DC. Pr.* iii. 406), = S. micranthum (*Bast. in DC. Fl. Fr.* v. 523; *Gren. et Godr. Fl. Fr.* i. 623).

Mar. merid.—Seksaoua! Milhaïn! et alibi in reg. inferiore visum!

Ar. Geog. Habitat cum specie, præsertim in calidioribus: deest in Europa media.

Cel. Boissier in Fl. Orient. ii. 781, *S. micranthum* ad synonymon *S. albi* reduxit. Formæ intermediæ sæpe obviæ sunt, sed hoc sæpe in locis calidioribus solum prævalet, et facie satis diversum est ut pro varietate habeatur.

—— ——, var. GLANDULIFERUM. Foliis pubescenti-glandulosis differt fere eodem modo quo *S. glanduliferum*, Guss., a *S. dasyphyllo*, L., sed in nostro pedicelli et calyces glabri.

Mar. merid.—Gurguri prope Amsmiz circ. 900 m.! In convalle Amsmiz circ. 1400 m.!

S. ACRE (*L.*, *DC. Pr.* iii. 407).

Mar. sept.—In montibus prope Tetuan anno 1869 legit cl. G. Maw, et specimen in horto cultum communicavit!

Mar. merid.—In regione media Atlantis Majoris, a 1600 m. usque 2500 m. In convalle Amsmiz 1600–1700 m.! In monte Djebel Tezah circ. 2300! In ascensu versus jugum Tagherot, 2500 m.!

Ar. Geog. Europa omnis (exclusa arctica). Sibiria. Montes regionis Mediterraneæ (exclusa Macaronesia).

S. PRUINATUM (*Brot. Fl. Lus.* ii. 209), = S. elegans (*Lej. Fl. Spa.* i. 205), = S. reflexum, var. γ (*DC. Pr.* iii. 408).

Mar. sept.—In monte Beni Hosmar anno 1869 legit cl. G. Maw, et in horto coluit; nos iterum legimus nondum florens anno 1871! Spec. cultum habui a cel. Maw.

Ar. Geog. Europa media. Peninsula Iberica. Ditio Tetuanensis. In regione Mediterranea media et orientali verisimiliter deest.

Spec. nostra exsiccata cum authenticis comparata satis conformia. Spontanea primo aspectu *S. reflexo* similiora, sed flores omnino *S. elegantis* auct. Oculo fortiter armato folia exsiccata ex papillis minutis hyalinis asperula. *S. pruinatum*, ex spec. authenticis Lusitanicis, est omnino idem ac *S. elegans*. Brotero plantam vivam non vidit, sed spec. descripsit a Link communicata. Descriptio Broteriana idonea, et nomen ab ipso impositum jure prioritatis gaudet.

S. ALTISSIMUM (*Poir. Dict.* iv. 634; *DC. Pr.* iii. 408).

Mar. sept.—In ditione Tingitana legerunt cl. Rein et Fritsch (*spec. in Herb. Kew.*)!

Mar. merid.—Ourika (*J. D. H.*)!
Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

SEDUM HISPIDUM (*Desf. Fl. Atl.* i. 361; *DC. Pr.* iii. 409, *non Poir.*).
Mar. sept.—In monte Beni Hosmar prope Tetuan, specimen nanum nondum florens caule exsiccato anni præcedentis recognoscendum!
Ar. Geog. Africa boreali-occidentalis.

SEMPERVIVUM (*L. Gen.* 612).

S. ATLANTICUM (*Ball in Journ. Bot.* 1873, 333; *Bot. Mag.* tab. 6055).

E grege *S. tectorum* et sicut subspecies enumerandum; differt a typo notis sequentibus:—folia rosularum obovato-oblonga, apice breviter mucronata, utrinque (in planta spontanea) breviter glanduloso-pubescentia, margine ciliata; folia caulina lanceolato-oblonga, superiora glanduloso-pubescentia; calyx fere ad basin fissus; stamina omnia perfecta, virginea obscure viridia (nec rubella); squamæ hypogynæ minutissimæ glandulosæ; carpella divergentia, basi toro elevato suffulta, et a verticillis exterioribus (squamis exceptis) omnino discreta, staminibus æqualia, petalis $\frac{2}{3}$ breviora.

Mar. merid.—Rosulas foliorum legimus in convalle Aït Mesan, anno 1871; ex his, post annos duos, caules floriferi in Horto Kewensi enati sunt.

In tanta copia formarum pro speciebus novis a botanicis hodiernis, et imprimis a cl. Jordan, descriptarum notæ differentiales plane evadunt. Inter tabulas Jordanianas nullam video plantæ nostræ omnino conformem, et invito animo nomen novum proposui.

MONANTHES (*Haw. Rev. Pl. Succ.* 68).

M. ATLANTICA (*Ball in Journ. Bot.* 1873, 333),= M. muralis (*H. f. in Bot. Mag.* ser. 3, No. 333, tab. 5988); *non* Petrophyes muralis (*Webb in Bourgeau, Plant. Canar.* No. 269 et 1284, *nec C. Bolle in Bonplandia*, vii. 244),=Sedum surculosum (*Coss. Index in Bull. Soc. Bot. Fr.*).

Mar. merid.—In regione superiore Atlantis Majoris. Legi in monte Djebel Tezah alt. circ. 2400 loco uliginoso juxta nives deliquescentes! Djebel Ouensa (*Coll. Indig. Ibrahim*), *Coss.*, sub *Sedo surculoso*!

Pace amici celeberrimi stirpem nostram cum planta Canariensi supra memorata in unam speciem confundere nequeo. Ratio partium floralium est omnino diversa; calyx brevior dentibus triangularibus; petala *late ovato-acuminata*, nec *lineari-lanceolata* ("linearia," Bolle, *l. c.*), calycem *duplo superantia*, nec *paulo longiora*; staminodia (squamæ perigynæ) *parvula*, ima basi carpellorum adhærentia et *ter breviora*, nec magna, margine imbricata, *carpellis paulo breviora* ("coronam conspicuam laxam formantia," Bolle, *l. c.*); stamina longiora petalis opposita, calyce duplo longiora sunt, et petalis subæqualia, series altera petalis alterna fit demum subæquilonga (ut videtur in tabula Webbiana *Petrophyis agriostaphis*, Phyt. Canar. tab. 36, C); carpella denique omnino *nitida*, nec *undique papillosa*, latiora sunt et apice stylifero demum divaricata. His addas characteres levioris momenti: scil., flores pentameri vel rarius hexameri, folia in ramis florigeris sparsa, et in planta spontanea tantum basi rosulata, calyx semper *glaberrimus* nec glandulis rubris hirtus, pedicelli subglaberrimi sed interdum pilis paucis glandulosis adspersi.

Propior erit *P. agriostaphis*, Webb, et forsan *P. tilophila*, Bolle (nomen barbarum!), species montanæ, sed ambæ a nostra satis superque diversæ. De speciebus Canariensibus quarum 5 jam descripsit beatus P. B. Webb, et 4 addidit clar. C. Bolle, judicent qui eas in loco natali vivas videbunt. In sicco extricatu nimis difficiles sunt. In planta nostra ovula pauca adscendentia versus basin folliculi ad suturam ventralem affixa sunt, ut jam innotuit celeb. J. D. Hooker loco citato. Si eadem se habet structura in sp. affinibus, foret character genericus non parvi momenti.

Tabula Fitcheana in Bot. Mag. *l. c.*, mendis nonnullis non caret; stamina longiora petalis alternantia, nec opposita, et nimis brevia ostendit; folia caulina (in planta spontanea) longiora sunt et basin versus attenuata, carpella matura in vivo sunt magis inflata, nec superne sub stylo sensim attenuata.

Cel. Cosson, verisimiliter ob squamas perigynas parvulas et flores sæpe pentameros, plantam nostram inter *Seda* collocavit; sed, ut mihi videtur, invita natura, nisi genus *Monanthes* pro subgenere *Sedi* habendum sit. In *Monanthe* numerus partium floralium quam maxime variabilis; nil mirum igitur si dantur etiam species pentameræ. Genus videtur satis diversum, calycis basi disciformi, stigmatibus capitellatis, ovulis adscendentibus, et habitu singulari a *Sedo* dignoscendum.

DROSERACEÆ (*DC. Théor. Elém.* 214).

DROSOPHYLLUM (*Link, in Schrad. N. Journ.* 1806, p. 2).

D. LUSITANICUM (*Link, l. c.*; *DC. Pr.* i. 320), = Drosera lusitanica, *L.*

Mar. sept.—Prope Tanger in monte Djebel Kebir (*Salzm. Exsicc.*)! (*Schsb. Herb.*), *Coss. spec.*! (*Webb Herb.*)! Prope Cap. Spartel! In saxosis calcareis prope Tetuan!

Ar. Geog. Species propria peninsulæ Ibericæ et Mauritaniæ Tingitanæ.

HALORAGEÆ (*R. Br. Gen. Rem.* 17).

CALLITRICHE (*L. Gen.* 13).

C. VERNALIS (*Kütz. in Linnæa*, vii. 175), = C. verna (*L.*, *DC. Pr.* iii. 70), pro parte.

Mar. sept.—Tanger!

Ar. Geog. In temperatis et reg. frigidioribus hemisphæræ borealis fere ubique. In regione Mediterranea minus frequens.

MYRIOPHYLLUM (*L. Gen.* 1066).

M. SPICATUM (*L., DC. Pr.* iii. 68).

Mar. sept.—? Ex Mauritania, verisimiliter Tingitana (*Salzmann, sec. Webb, Phyt. Can.* ii. 4).

Ar Geog. In aquis stagnantibus et lente fluentibus hemisphæræ borealis (exclusa arctica et tropicali), et ad prom. Bon. Spei.

MYRTACEÆ (*R. Br. Gen. Rem.* 14).

MYRTUS (*L. Gen.* 617).

M. COMMUNIS (*L., DC. Pr.* iii. 239).

Mar. sept.—In collibus Tingitanis! El Araisch (*R. et Fr. spec. Hort. Kew.*)!

Ar. Geog. Regio Mediterranea omnis. In Macaronesia nonnisi in insula Madeira.

In horto Præfecti juxta pagum Amsmiz ad radices Atlantis vidimus varietatem singularem *M. communis* ramis crassioribus velutinis, foliis magnis 1½-2-pollicaribus, præsertim secus nervum medium pilosiusculis, demum subglaberrimis, non lucentibus, dense confertis, florum pedicellis quam folia dimidio brevioribus. De origine hujus varietatis nil certi comperire potui, sed verisimiliter ex hortis urbis Marocco introducta est. In itinere per provincias meridionales Imperii *M. communis* spontanea non nobis obvia fuit.

LYTHRARIEÆ (*Juss. Dict. Sc. Nat.* xxvii. 453).

PEPLIS (*L. Gen.* 446).

P. NUMMULARIÆFOLIA (*Lois. Not.* 74, 1810, *et DC. Pr.* iii. 81, sub *Lythro*; *Jord. Obs. Fragm.* iii. 85. tab. 5. fig. D), = P. erecta (*Req. in Benth. Cat. Pl. Pyr.* sine diagnosi, 1826; *Gr. et Godr. Fl. Fr.* i. 598; *Boiss. Fl. Or.* ii. 742), = P. biflora (*Salzm. Exsicc. Tingit.* 1825; *DC. Pr.* iii. 77), = P. tithymaloides (*Bertol. Fl. It.* iv. 233).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Nec a nobis nec ab aliis botanicis recentioribus in agro Tingitano visa.

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia). In Oriente nonnisi prope Byzantium indicata. In Italia et Græcia desideratur.

Nomen antiquius restitui, dum hæc est certissime *Lythrum nummulariæfolium*, Lois. *l. c.*, et fere certe etiam Pers. Syn. ii. 8, quamvis ob descriptionem mancam nomen Persoonio non tribuendum. Nomen *erecta* (ineptum, dum sp. affines pariter erectæ), sine nota diagnostica editum, recentius, et nulla auctoritate gaudens, omnino rejiciendum. Nomen Salzmannianum infelix, dum flores sæpissime solitarii.

LYTHRUM (*L. Gen.* 604).

L. HYSSOPIFOLIUM (*L., DC. Pr.* iii. 81).

Mar. sept.—In monte Djebel Kebir!

Mar. occid.—Casa Blanca! Mazagan!

Ar. Geog. Herba amphigea in temperatis fere totius orbis obvia, per omnem regionem Mediterraneam diffusa.

Specimina pr. Mazagan lecta sunt diffusa basi prostrata; cætera omnia erecta.

—— ——, var. THYMIFOLIUM, = L. thymifolium (*DC. Pr.* iii. 81, forsan *L.* et auct. plurim.; non *Moris, Fl. Sard.*).

Mar. sept.—Prope Cap. Spartel (*Schousb. Herb.*), *Coss. spec.*!

Ar. Geog. Regio Mediterranea fere omnis. In Madeira? Rossia australis.

Specimina a cel. Cosson benevole communicata referunt formam intermediam inter typum et *L. thymifolium* auct. In collibus humidiusculis prope San Roque haud procul Gibraltar legi formas plurimas, quibus transitus a typo in *L. thymifolium* plane demonstratur. Specimina nonnulla habent folia anguste linearia et calyces 8-dentatos, altera a *L. hyssopifolio* nullomodo distinguenda sunt, altera intermedia.

L. flexuosum (*Lag. Gen. et Sp. Nov.* 16; *DC. Pr.* iii. 82), = L. acutangulum (*Lag. l. c.*), = L. Græfferi (*Ten. Fl. Nap.* iv. 256; *DC. Pr. l. c.*), = L. alatum (*Presl, non Pursh*), = L. Preslii (*Guss. Pl. Rar.* 188), = L. hyssopifolium (*L., Herb., non Sp. Pl.* 642; *D'Urv. Enum.* 52).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Inter Tanger et Tetuan! Prope Tetuan (1851)!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Sat frequens in irrigatis et locis humidiusculis regionis inferioris. Legimus ad Aïn Beida inter Sheshaoua et urbem Marocco! in distr. Mesfioua! et prope Ourika!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

A *L. hyssopifolio* facile distinguitur floribus duplo triplove majoribus læte roseis, sed hæ notæ diagnosticæ parvi momenti et parum stabiles. Hoc sæpius basi prostratum radicans, dum *L. hyssopifolium* sæpius sed non semper erectum. Folia latiora basi subcordata; sed similia vidi etiam in *L. hyssopifolio.* Pro subspecie enumeravi.

L. SALZMANNI (*Jord. Obs. Fragm.* v. 42, tab. 2. fig. B), = L. bibracteatum (*Salzm. in DC. Pr.* ii. 81), = L. tribracteatum (*Salzm. Exsicc. Tingit.*; *Spreng. Syst. Cur. Post.* 190), = L. thymifolium (*Sibth. et Sm.*

Pr. Fl. Gr. i. 321; *Moris, Fl. Sard.* ii. p. 71; *L. Sp. Pl.* 642; quoad synon. Barrelieri),=L. thymifolium, var. β (*DC. Pr.* ii. 81).

Mar. sept.—Prope Tanger a b. Salzmann detectum (*Webb Herb.*)!

Ar. Geog. Species per regionem Mediterraneam (exclusa Macaronesia) late diffusa, nullibi frequens, sed verisimiliter a botanicis plurimis prætervisa.

Videtur probe distincta species, nec cum *L. thymifolio* confundenda. Nomen Salzmannianum *bibracteatum* ineptum, dum sp. omnes affines floribus bibracteatis gaudent; *tribracteatum* erroneum, dum bracteæ semper binæ.

LYTHRUM SALICARIA (*L., DC. Pr.* iii. 82), var. TOMENTOSUM (*DC. Pr. l. c.*),=L. tomentosum (*Mill. Dict.* sec. *Boiss.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Species per hemisphæram fere omnem borealem temperatam, et usque in Australiam diffusa, fit rarior in reg. Mediterranea calidiore, ubi var. nostra sat frequens, sed in ditione Maroccana hæc etiam rara, a nobis nullibi visa. Tam species quam varietas deest in Macaronesia.

In Marocco colitur hinc inde *Lawsonia alba* (Lam. Dict. i. 106),=*L. inermis*, L., et *L. spinosa*, L.; sed nec indigena nec spontanea facta.

PUNICA (*L. Gen.* 618).

P. GRANATUM (*L., DC. Pr.* iii. 3).

Mar. sept.—Prope Tetuan videtur spontanea!

Mar. occid.—Casa Blanca! Mogador (*Lowe Cat.*).

Mar. merid.—Colitur frequenter in prov. meridionalibus et verisimiliter per totum Imperium et sæpe videtur spontanea, sed pro specie vere indigena vix habenda. Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Ex India boreali-occidentali olim allata; hodie in regione Mediterranea sponte provenit.

ONAGRARIEÆ (*Juss. Ann. Mus.* iii. 315).

EPILOBIUM (*L. Gen.* 471).

E. HIRSUTUM (*L. Sp. Pl.* 494, pro parte; *DC. Pr.* ii. 42).

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Europa omnis (exclusa arctica). Asia temperata. Per regionem Mediterraneam (exclusa Macaronesia) dispersa, sed infrequens. Indicatur etiam in Abyssinia et ad prom. Bon. Spei.

E. PARVIFLORUM (*Schreb. Spic. Fl. Lips.*; *DC. Pr.* iii. 43),=E. molle (*Lam. Dict.* iii. 475),=E. pubescens (*Schousb. Gew. Marok.* 171).

Mar. sept.—Tanger (*Schsb. l. c.*).

Ar. Geog. Europa omnis (exclusa arctica). Regio omnis Mediterranea (inclusa Macaronesia).

E. TETRAGONUM (*L., DC. Pr.* iii. 43; *Schousb. Gew. Marok.* 171).

Mar. sept.—Tanger! (*Schsb. l. c.*).

Ar. Geog. Per hemisphæram borealem (exclus. reg. arcticis et zona tropica) late diffusum; in regione Mediterranea omni (inclusa Macaronesia) satis frequens. Ad prom. Bon. Spei, et in insula Tasmania obvium.

Stirps valde ludibunda in species plurimas ab auctoribus dilaniata. Harum nonnullæ videntur satis constantes et sicut subspecies enumerandæ.

—— ——, var. ? TINGITANUM, = E. tingitanum, *Salzm. Exsicc.*

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Forma insignis, floribus duplo triplove majoribus *E. hirsuti* æmula, caule 1½–3-pedali, inferne pallide fusco nitido, superne pubescente, lineis obscuris, vix tetragono, ramoso, foliis oblongis basin versus attenuatis, etiam inferioribus sessilibus, mediis latiusculis apice ovato-obtusis, supremis angustis obtusiusculis. Semina matura non vidi. Pluribus notis ad *E. Tournefortii* (Michal. in Bull. Bot. Soc. Fr. 1855, 731; Boiss. Fl. Or. ii. 748) accedit, sed in hoc caules ex lineis elevatis subalati.

CUCURBITACEÆ (*Juss. Gen.* 393).

CITRULLUS (*Schrad. in Eckl. et Zeyh. Enum.* 279).

C. COLOCYNTHIS (*L.*, *DC. Pr.* iii. 302, sub *Cucumi*; *Schrad. Linnæa*, xii. 414).

Mar. occid.—Prope Saffi (*J. D. H.*)!

Mar. merid.—In saxosis aridissimis regionis inferioris satis frequens et certe indigenus. Legimus pr. Sheshaoua! Mzouda! Mtouga! Prope Frouga (*G. Maw spec.*)!

Ar. Geog. Regio Mediterranea calidior. Reg. subtropica Africæ borealis et Indiæ orientalis. Ins. Canarienses et Cap. Viridis. In Europa nonnisi in Hispania Bætica et in insula Pantellaria detecta.

ECBALIUM (*Rich. in Dict. Class. Hist. Nat.* vi. 19).

E. ELATERIUM (*L.*, *DC. Pr.* iii. 311, sub *Momordica*; *Rich. loc. cit.*).

Mar. sept.—Visum inter Tetuan et Ceuta!

Ar. Geog. Regio Mediterranea fere omnis, imprimis orientalis. Deest in Macaronesia.

BRYONIA (*L. Gen.* 1093).

B. DIOICA (*Jacq. Fl. Austr.* tab. 199; *DC. Pr.* iii. 307).

Mar. occid.—Prope Mogador!

Mar. merid.—Sat frequens in dumetis et sepibus ad radices Atlantis Majoris. Amsmiz! Aït Mesan 1300–1400 m.!

Ar. Geog. Europa media. Regio fere omnis Mediterranea (exclusa Macaronesia).

B. ACUTA (*Desf. Fl. Atl.* ii. 360; *DC. Pr.* iii. 308).

Mar. sept.—Tanger!

Mar. occid.—Agadir (*Coll. Indig.* 1871)! Prov. Haha haud procul Mogador!

Mar. merid.—Satis frequens in regione inferiore et ad radices Atlantis Majoris. Legimus in prov. Shedma! pr. Mzouda! et Seksaoua! Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa boreali-occidentalis. Sicilia.

[CACTEÆ nullæ in ditione Maroccana indigenæ sunt; sed *Opuntia vulgaris*, Mill., olim in Africam borealem introducta, hodie spontanea facta, per territorium omne nobis cognitum frequens occurrit.]

FICOIDEÆ (*Juss. Gen.* 315).

MESEMBRYANTHEMUM (*L. Gen.* 628).

M. NODIFLORUM (*L., DC. Pr.* iii. 447).

Mar. occid.—Saffi! Mogador!

Mar. merid.—Satis frequens, præsertim in saxosis aridissimis regionis inferioris. Legimus prope Sheshaoua! Misra Ben Kara! Ourika! Prov. Shedma!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

M. CRYSTALLINUM (*L., DC. Pr.* iii. 448).

Mar. occid.—Mogador, præsertim in insula! Saffi!

Ar. Geog. In arenosis et rupestribus maritimis regionis Mediterraneæ calidioris (inclusa Macaronesia) late diffusa. Occurrit etiam in Africa australi extratropica.

AIZOON (*L. Gen.* 629).

A. CANARIENSE (*L., DC. Pr.* iii. 453).

Mar. merid.—Distr. Mesfioua haud procul urbe Marocco! Frouga (*G. Maw spec.*)!

Ar. Geog. Per regionem Mediterraneam calidiorem subtropicam dispersa, nec in Europa, nec versus litora Maris Interni se extendit. Indicatur in India boreali-occidentali, et ad prom. Bon. Spei.

A. HISPANICUM (*L., DC. Pr.* iii. 454).

Specimina ex Imperio Maroccano, verisimiliter a b. Schousboe communicata, exstant in herb. Webb sine loco natali!

Ar. Geog. Oriens. Hispania australis. Africa borealis.

UMBELLIFERÆ (*Juss. Gen.* 218).

HYDROCOTYLE (*L. Gen.* 325).

H. VULGARIS (*L., DC. Pr.* iv. 59; *Schousb. Gew. Marok.* 112).

Mar. sept.—Tanger (*Schsb. l. c.*).

Ar. Geog. Europa omnis (exclusa arctica). In regione Mediterranea fit rarior, in Oriente nonnisi in insulis Zacyntho et Creta detecta; desideratur in peninsula Iberica australiore et in Macaronesia.

ERYNGIUM (*L. Gen.* 324).

E. CAMPESTRE (*L., DC. Pr.* iv. 88; *Schousb. Gew. Marok.*).

Mar. sept.—Tanger (*Schsb. l. c.*). (*Salzmann spec. in herb. nost.*)! Folia tantum visa haud procul Tanger!

Ar. Geog. Europa media. Regio Mediterranea fere omnis. Desideratur, sicut et omnes sp. hujus generis, in Mácaronesia.

E. BOURGATI (*Gouan, Ill.* 7, tab. 3; *DC. Pr.* iv. 88), var. ATLANTICUM (*Ball in Journ. Bot.* 1873, 334). Differt a typo habitu graciliore, capitulis minoribus, involucri phyllis longioribus parce spinosis.

Mar. merid.—In regione superiore Atlantis Majoris. In monte Djebel Tezah circ. 2400 m.!

Ar. Geog. Species habitat in Pyrenæis et in montibus Hispaniæ; forma proxime affinis in Oriente.

Specimina nostra non florentia, caulibus fructiferis anni præcedentis prædita, et ideo haud omnino certa. Var. nostræ proximum est *E. Heldreichii* (Boiss. Diagn. Pl. Or. ser. i. x. 20), phyllis involucri carinatis, margine integris. Vidi tamen inter spec. *E. Heldreichii* phylla nonnulla margine parce spinulosa, et hoc pro varietate vel saltem pro subspecie habendum videtur.

E. DILATATUM (*Lam. Dict.* iv. 755; *DC. Pr.* iv. 88),=E. amethystinum (*Schousb. Gew. Marok.* 112).

Mar. sept.—Tanger (*Salzm. Exsicc.* sub "*E. amethystinum*")! (*Schsb. l. c.*).

Ar. Geog. Regio Mediterranea occidentalis. Deest in Oriente.

E. MARITIMUM (*L., DC. Pr.* iv. 89).

Mar. sept.—Tanger! (*Webb Herb.*)! Ex Marocco septentrionali (*Brouss.*) sec. Cavanilles.

Ar. Geog. In litoribus arenosis Europæ omnis temperatæ, Africæ borealis et Asiæ Mediterraneæ.

E. TRIQUETRUM (*Vahl, Symb.* ii. 46; *DC. Pr.* iv. 90).

Mar. occid.—Casa Blanca!

Mar. merid.—Satis frequens in regione inferiore. Sheshaoua! prope urbem Marocco! Distr. Mesfioua! Amsmiz! Aïn Tarsil! Reraya! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa boreali-occidentalis. Sicilia.

E. DICHOTOMUM (*Desf. Fl. Atl.* 226, tab. 55; *DC. Pr.* iv. 90).

Mar. sept.—Legi specimen unicum, caule fructifero anni prioris, in monte Beni Hosmar prope Tetuan!

Ar. Geog. Africa borealis ex Ægypto usque montes Tetuanenses. Hispania. Sicilia.

E. VARIIFOLIUM (*Coss. in Ind. Pl. Maroc.* 19),=E. dichotomum, var. ficariæfolium (*Ball in Journ. Bot.* 1873, 334).

Mar. merid.—Legimus nondum florens, caulibus exsiccatis anni prioris, in uliginosis Atlantis Majoris circ. 1700 m. in convalle Aït Mesan! Ex monte Djebel Ouensa attulit indigenus Ibrahim et spec. comm. Cosson!

Planta Atlantica mihi non satis nota, a cel. Cosson mox describenda.

Eryngium aquifolium (*Cav. Anal. Cienc. Nat.* iii. 32; *DC. Pr.* iv. 91).

Mar. sept.—? Tanger (*Brouss., sec. Cav. l. c.*).

Ar. Geog. Hispania Gaditana. Mauritaniæ dubia civis.

A botanicis recentioribus nusquam in agro Tingitano visum, nec a sedulo scrutatori b. Schousboe. Broussonnet forsan specimen Hispanicum inter plantas Tingitanas misit?

E. tricuspidatum (*L. Sp. Pl.* 337?; *Desf. Fl. Atl.* i. 224; *DC. Pr.* iv. 92; *Schousb. Gew. Marok.* 110).

Mar. sept.—In monte Djebel Kebir et alibi pr. Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*) (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mazagan! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Pluries visum, specimen legit G. Maw prope Tasseremout!

Ar. Geog. Regio Mediterranea occidentalis. Africa borealis. Hispania australis. Sardinia. Sicilia. Græciæ dubia civis.

E. ilicifolium (*Lam. Dict.* iv. 757; *DC. Pr.* iv. 92).

Mar. occid.—Sallé (*Brouss. ex Cavanilles*). Saffi! Aïn el Hadjar! Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)! Prov. Haha haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Occurrit frequentissime in regione inferiore, sæpius nanum, interdum ramis plurimis 6–8-pollicaribus. Prov. Shedma pluribus locis! Aïn Tarsil!

Ar. Geog. Africa boreali-occidentalis. Peninsula Iberica.

E. tenue (*Lam. Dict.* iv. 755; *DC. Pr.* iv. 92).

Mar. occid.—Mogador (*Brouss. ex Cavanilles*) (*R. et Fr. spec. in Herb. Kew.*)! Aïn el Hadjar!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

HIPPOMARATHRUM (*Link, Enum. H. Berol.* i. 271, *non Rivin.*).

H. pterochlænum (*DC. Pr.* iv. 237, sub *Cachryde*; *Boiss. Ann. Sc. Nat.* ser. 3, ii. 74), = Cachrys sicula (*L., Herb., ex Gay*; *an Sp. Pl.* 355?).

Mar. sept.—Tanger! (*Salzm. Exsicc.*, sub "*Cachrys sicula*")! (*Webb Herb.*)!

Mar. merid.—? Prov. Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Sardinia. Deest, sicut etiam sp. affines, in Macaronesia.

H. cristatum (*DC. Pr.* iv. 238, sub *Cachryde*; *Boiss. Fl. Or.* iv. 932), = Cachrys sicula (*Sibth. et Sm. Fl. Gr.* tab. 278; *Urv. Enum.* 31; *non L.*), var. Bocconi = H. Bocconi (*Boiss. Ann. Sc. Nat.* ser. 3, ii. 74),

=C. Libanotis (*Salzm. Exsicc. et Schousb. Herb., non L.*),=C. lævigata (*Brouss., non Lam.*, sec. specimen ab ipso Broussonnet in Herb. Kew.),=C. pungens (*Jan.*, sec. spec. Genuense ab ipso Jan in Herb. Kew., et verisimiliter *DC. Pr.* iv. 238).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. Herb.*) *Coss. spec.*! (*Brouss. in Herb. Gouan, hodie Kew.*)!

Ar. Geog. H. cristatum in regione Mediterranea orientali, *H. Bocconi* in occidentali obvium, sed ob synonyma dubia loci natales plurimi incerti.

Hippomarathrum Libanotis (*L., et DC. Pr.* iv. 237, sub *Cachryde*; *Koch in litt., sec DC. loc. cit.*).

Mar. merid.—? Aïn Tarsil spec. nimis immaturum! et verisimiliter eadem planta, foliis tantum expansis, prope Sektana!

Ar. Geog. "Mauritania; Sicilia" (fide DC. *l. c.*).

Ab affinibus differt herba glauca glabra, foliis minus divisis segmentis breviter trifidis, involucro ex foliolis latioribus, inferne ex nervo prominulo bisulcatis, margine scabris, radiis dimidio brevioribus, integris linearibus crassiusculis, involucellis brevissimis. Spec. nostra, ob fructus defectum incerta, forsan ad sp. præcedentem referenda.

Hippomarathra omnia mihi nota valde ludibunda sunt et notæ differentiales parum stabiles. Optimo consilio, ut mihi videtur, cel. Moris plurimas formas sardoas in unam speciem (*Ægomarathrum siculum*, Fl. Sard. ii. 176) reduxit. Specimina fructifera in herbariis sæpe desunt, et diagnoses nimis arduæ et incertæ fiunt. Nisi obstitisset auctoritas summorum virorum, qui species affines in sectiones generis proprias, immo in genera diversa collocarunt, *Hippomarathra* omnia Europæa et Africana boreali-occidentalia in unam speciem nomine triviali Linnæno (*H. siculum*) reducere maluissem.

[Quid sit *Cachrys humilis* (Schousb. Gew. Marok. 118), prope Cap. Spartel cum *Crithmo maritimo* crescentem detecta, eruere non potui. Planta ulterius inquirenda, a nemini post Schousboe visa.]

CONIUM (*L. Gen.* 336).

C. MACULATUM (*L., DC. Pr.* iv. 242).

Mar. sept.—Tetuan (*Webb Herb.*)!

Mar. merid.—In hortis et ruderatis urbis Marocco!

Ar. Geog. Europa omnis (exclusa arctica). Regio Mediterranea omnis (inclusa Macaronesia). Asia temperata. Abyssinia.

SMYRNIUM (*L. Gen.* 363).

S. OLUSATRUM (*L., DC. Pr.* iv. 247).

Mar. sept.—Prope Tetuan!

Mar. merid.—Secus rivulum prope Amsmiz!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). In Anglia et Gallia occidentali, olim introductum, nunc spontaneum.

BUPLEURUM (*L. Gen.* 328).

B. TENUISSIMUM (*L., DC. Pr.* iv. 127), var. COLUMNÆ, *Coss.*, = B. Columnæ (*Guss. Pr. Fl. Sic. Suppl.* 70).

Mar. sept.—Tanger (*Schsb. Herb.*), *Coss. spec.*!

Ar. Geog. Regio Mediterranea. Deest in Oriente (exceptis insulis Maris Interni), et in Macaronesia. In cultis Europæ mediæ usque in Sueciam australem diffusum, sed verisimiliter cum seminibus introductum.

B. procumbens (*Desf. Fl. Atl.* i. 230, tab. 56; *DC. Pr.* iv. 127; *Schousb. Gew. Marok.* 113).

Mar. merid.—In provincia Haha (*Schsb. l. c.*).

Ar. Geog. Africa borealis. Sardinia.

Nimis proximum *B. tenuissimo*, sicut subspecies, nisi forte varietas, enumerandum.

B. GLAUCUM (*Rob. et Cast. in DC. Suppl. Fl. Fr.* 515; *DC. Pr.* iv. 127), = B. semicompositum (*Sibth. et Sm. Fl. Gr.* tab. 261; *DC. Pr.* iv. 128, *vix L.*).

Mar. occid.—Mogador! Aïn el Hadjar! Prov. Haha, haud procul Mogador.

Mar. merid.—Ex prov. Shedma haud procul castello Gubernatoris!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

B. semicompositum (L. Sp. Pl. 342) est species incerta, hodie vix extricanda. Planta est Hispanica, notis diagnosticis non definita, *B. odontiti* affinis, et ideo a sp. nostra diversa.

B. ODONTITES (*L., DC. Pr.* iv. 129)?

"Mauritania" (DC. Pr. *l. c.*). Ditionis nostræ dubia civis, sed verisimiliter non deest.

Ar. Geog. Regio Mediterranea imprimis orientalis. Spec. ex Africa boreali nondum vidi. Deest in Macaronesia.

B. PROTRACTUM (*Link et Hoffm. Fl. Port.* ii. 387; *DC. Pr.* iv. 129), = B. rotundifolium (*Schousb. Gew. Marok.* 112, *non L.*).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Schsb. l. c.*).

Ar. Geog. Regio Mediterranea fere omnis. In Macaronesia nonnisi in ins. Madeira detectum. Gallia media et occidentalis.

B. PANICULATUM (*Brot. Fl. Lus.* i. 455; *DC. Pr.* iv. 131).

Mar. sept.—Tanger (*Schsb. Herb.*, sub "*B. nervosum*"), *Coss. spec.*!

Ar. Geog. Peninsula Iberica. Ditio Tingitana.

B. SPINOSUM (*L. fil., DC. Pr.* iv. 133).

Mar. merid.—In Atlante Majore valde frequens, a regione inferiore (e. g. Tasseremout, 1100 m.!) usque in reg. alpinam (in jugo Tagherot, 3500 m.!).

Ar. Geog. Africa boreali-occidentalis. Hispania. Corsica.

Cum *Alysso spinoso* adsociatum dumeta densa in clivo Atlantis efficit.

BUPLEURUM FRUTICESCENS (*L., DC. Pr.* iv. 133).

Mar. sept.—Tetuan (1851)! (*Webb Herb.*)!

Ar. Geog. Hispania, Gallia australis. Africa boreali-occidentalis.

Specimen nostrum Hispanicis sat conforme, sed omnia quæ vidi Africana elatiora et minus ramoso-intricata sunt. Foliola involucri et involucelli ab auctoribus dicuntur *subulata*; sed in multis spec. a me scrutatis hæc semper lanceolata sunt, interdum subacuta, sæpius subacuminata, in spec. ex Djebel Zaghouan a cl. Kralik lecta plane acuminata sunt. Hac nota et radiis filiformibus planta Kralikiana ad sequentem proxime accedit.

B. oligactis (*Boiss. Diagn. Pl. Or.* ser. 2, ii. 84), = B. exaltatum, *M. B.*, var. oligactis (*Coss. Ind. Pl. Maroc.*).

Mar. merid.—In monte Djebel Sidi Fars, alt. 1200 m. (*Balansa*) *Coss. Index.* Specimen nimis immaturum et incertum legi prope Seksaoua!

B. oligactis, Boiss., planta Africæ borealis mihi non satis cognita, monente cel. auctore est valde proximum *B. fruticescenti,* et ex descriptione subspeciem florum pedicellis paulo longioribus distinguendam sistit. Nota diagnostica ex forma foliolorum involucri et involucelli certe fallax. In *B. fruticescente* pedicelli semper plus minusve inæquales. Video flores nonnullos subsessiles, alios pedicellis quam involucellum dimidio brevioribus fulcratos. Si bene novi *B. exaltatum,* M. B., hoc a *B. oligactine* differt, præter alias notas, fructus jugis prominentibus, subalatis, nec obtusissimis subevanidis. Sententia cel. Boissier, qui *B. exaltatum* cum *B. Sibthorpiano* ad *B. gramineum* (Vill. Fl. Dauph. ii. 575) reduxit, mihi melius placuit; sed nomen Villarsianum Hosteano recentiori (*B. baldense*) anteponendum. Confer Fl. Or. ii. 847.

B. DUMOSUM (*Coss. et Bal. in Balans. Pl. Maroc.* 1867 ; *Coss. in Bull. Soc. Bot. Fr.* xx. 249).

Sequitur descriptio Cossoniana :—"*Frutex* circiter 1 m. altus, erectus, divaricatim ramosus, dumosus, *caule ramisque vetustis lignosis* cortice cinereo-fuscescente vel nigrescente, ramis florigeris annotinis frutescentibus striatis glabris. *Folia* parvula, alterna, *pleraque in ramis axillaribus* abbreviatis *fasciculata*, glaucescentia, coriacea, perennantia, anguste *oblonga*, 3-*nervia*, nervis parallelis prominulis, *venulis transversalibus obsoletis*, margine lævigata vel scabriuscula, etiam inferne haud albo-marginata, sessilia, apice abrupte mucronata mucrone recurvo. *Umbellæ* laxe paniculatæ, 3-4-*radiatæ, radiis* subæqualibus *gracilibus* suberectis. *Involucri* 3-4-phylli *foliolis* subæqualibus lanceolato-linearibus, *radiis umbellæ multoties brevioribus. Involucella* 3-5-phylla *pedicellos longe excedentia*, foliolis linearibus acuminatis. *Pedicelli brevissimi* fructu multoties breviores. *Fructus* oblongus, nitidulus, *jugis vix prominentibus, valleculis lævibus*."

Mar. merid.—In montibus ad austro-occidentem urbis Maroc. in parte superiore montis Aït Ougourt prope Keïra, ad 1100 metr.; fructiferum legit mense Majo 1867 cl. Balansa. Spec. in herb. nost.!

Juxta *B. fruticescens*, L., collocandum, sed, monente cel. auctore, distinctissimum caule fere toto lignoso, foliis oblongis, non linearibus, plerisque in axillis fasciculatis, umbellulis 2–5-floris, non plurifloris.

Hæc est species præcox: eodem mense, anno 1871, *B. acutifolium* vix florens vidimus, et in *B. laterifloro* et *B. oblongifolio* alabastra umbellifera nondum expansa.

BUPLEURUM ACUTIFOLIUM (*Boiss. Elench.* 83; *Voy. Esp.* 246, tab. 71; *Walp.* ii. 397).

Mar. merid.—In convalle Aït Mesan 1400–1800 m.! In convalle Amsmiz circ. 1500 m.!

Ar. Geog. Hispania australis. Atlas Major.

Specimina nostra immatura Hispanicis conformia sunt. Florum pedicellis ter quaterve longioribus (præter alias notas) a *B. fruticescente* egregie differt.

B. FOLIOSUM (*Salzm. in DC. Pr.* iv. 133).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir (*Schsb. Herb.*), *Coss. spec.*!

Ar. Geog. Species propria agri Tingitani.

Hoc est *B. tortuosum* et *B. obliquatum*, Schsb. Herb. Variat foliis minoribus crebris vel majoribus magis distantibus; caulina superiora semper basi dilatata subamplexicaulia. Ab omnibus affinibus differt foliorum nervo dorsali prominente, parallelis nullis, lateralibus obsoletis.

B. CANESCENS (*Schousb. Gew. Marok.* 113; *DC. Pr.* iv. 133).

Mar. sept.—El Araisch (*R. et Fr. spec. in Herb. Kew.*)!

Mar. occid.—Mogador (*Schsb.*) *l. c.* (*Brouss., sec. Cavan. Anal. Cienc. Nat.*) (*Lowe Cat.*). Magis frequens prope Aïn el Hadjar in dumetis et sepibus usque 9–10-pedale!

Ar. Geog. Species nonnisi in litore Atlantico Mauritaniæ hucusque visa.

Diagnosis Candolleana haud accurata. Folia nullomodo membranacea, sed coriacea, superiora sæpius breviter mucronata, nec obtusissima, involucri et involucelli foliola ovato-lanceolata acuta, nec oblonga obtusa. Confer Schousboe l. c., qui speciem optime descripsit. Valde proximum est *B. plantagineo* (Desf. Fl. Atl. i. 233, tab. 57). Hoc differt herba non glaucescente, foliis inferioribus multo majoribus, ovato-lanceolatis, omnibus mucronatis, involucri foliolis anguste lanceolatis duplo longioribus. Planta nostra forsan sicut subspecies enumeranda.

B. OBLONGIFOLIUM, *nob.*

Fruticosum ramosum, e trunco lignoso ramos longos flexiles cylindricos teretes lineolatos emittens; folia omnia oblonga apice ovalia, mucronata, basi vix attenuata, semiamplexicaulia, margine lævia, nervis 7–9 parallelis in pagina inferiore prominentibus notata; umbellæ laxe paniculatæ 3–5-radiatæ, radii tenues inæquales; involucri foliola pauca inæqualia lineari-lanceolata; umbellulæ 4–6; involucelli foliola lanceolata acuta pedicellis brevibus (inæqualibus?) duplo longiora. Fructum non vidimus.

Mar. merid.–In convalle Aït Mesan circ. 1400 m.! Prope Seksaoua, spec. unicum legit J. D. H.!

Ex ramis anni præcedentis umbellis exsiccatis adhuc onustis, prodeunt rami novelli florigeri, superne umbellas terminales et laterales paucas ramulis brevibus suffultas gerentes. Caules sub lente lineolati, vix aut ne vix striati vel sulcati.

Planta adhuc male cognita cum specie nulla adhuc descripta confundenda. A *B. dumoso*, Coss., recedit ramis tenuibus flexilibus, foliis ter longioribus insigniter 7–9-nerviis. *B. montanum*, Coss., longius distat ramis hieme marcescentibus, nec perennantibus, foliis acuminatis 5-nerviis. Hujus, sicut et nostræ, speciei fructus mihi adhuc incognitus.

BUPLEURUM LATERIFLORUM (*Coss. Ind. Pl. Maroc.* 19).

Mar. merid.—Legimus nondum florens in convalle Aït Mesan a 1300 m. usque 1600 m.! Ex monte Djebel Afougueur attulit indigenus Ibrahim (*Coss. l. c.*).

Species Atlantica, ut videtur, ab affinibus omnino distincta, ab auctore cel. mox describenda.

B. GIBRALTARICUM (*Lam. Dict.* i. 520; *DC. Pr.* iv. 133),=B. coriaceum (*L'Hérit., St. Nov.* fasc. 6; *Schousb. Gew. Marok.* 113),=B. obliquum (*Vahl, Symb.* i. 24).

"Hinc inde in fruticetis Imperii Maroccani" (*Schsb. l. c.*).

Ar. Geog. Africa boreali-occidentalis. Peninsula Iberica.

B. FRUTICOSUM (*L., DC. Pr.* iv. 133).

Mar. sept.—(*Schsb. Herb. ex Coss. spec.*)!

Ar. Geog. Per regionem Mediterraneam omnem (exclusa Macaronesia) dispersum, nullibi frequens.

APIUM (*L. Gen.* 367).

A. NODIFLORUM (*L. et Schousb. Gew. Marok.* 120, sub *Sio*; *Benth. et H. f. Gen. Pl.* i. 888),=Helosciadium nodiflorum (*Koch, Umb.* 126; *DC. Pr.* iv. 104).

Mar. sept.—Tanger! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In irrigatis juxta urbem Marocco!

Ludit sæpe petiolis basi dilatatis margine membranaceis. Confer var. *β, ochreatum* (DC. Prod. *l. c.*).

Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia). Abyssinia.

A. GRAVEOLENS (*L., DC. Pr.* iv. 101; *Schsb. Gew. Marok.* 128).

Mar. sept.—Sec. Schsb. introductum. Legi juxta ostium fluminis Tetuanensis (1851)!

Mar. occid.—In fossis inundatis juxta Aïn el Hadjar haud procul Mogador, spontaneum et forte indigenum!

Mar. merid.—Prov. Shedma (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. In Europa media hodie spontaneum in salinis maritimis, sed forsan olim introductum. Regio Mediterranea omnis a Beluchistan usque insulas Canarienses. Ad prom. B. Spei et in America australi introductum.

AMMI (*L. Gen.* 334).

A. MAJUS (*L.*, *DC. Pr.* iv. 112), inclusis *A. glaucifolio* (L., DC. Pr. *l. c.*) et *A. intermedio* (DC. Pr. iv. 113).

Mar. sept.—Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador (*Lowe*).

Mar. merid.—Frequens in regione inferiore. Shedma! (*R. et Fr. spec.*)! Aïn Beida! Prope urbem Marocco! Tasseremout ad radices Atlantis Majoris (*G. Maw spec.*)!

—— ——, var. TENUIS, *nob.*, verisimiliter *A. Broussonnetii* (DC. Pr. iv. 13).

Foliorum segmentis tenuioribus, umbellis minoribus, radiis filiformibus, involucri foliolis lineari-subulatis brevibus, sæpius integris, interdum trifidis, fructu juniore subasperulo. Specimina pumila hujus varietatis post imbres vernales mense Majo enata, foliorum segmentis linearibus, involucro depauperato, interdum ad foliolum unicum reducto, facie *Ptychotidi* similia sunt.

Mar. occid.—Aïn el Hadjar! Djebel Hadid! Agadir (*Coll. Indig.* 1851)!

Mar. merid.—Prov. Shedma prope Mskala!

Ex descript. Candolleana *A. Broussonnetii* a pl. nostra vix differt fructu juniore pube adpressa rara adperso.

Ar. Geog. *Ammi majus* est species valde ludibunda per regionem Mediterraneam omnem late diffusa, etiam in Abyssinia obvia. In cultis Europæ mediæ hinc inde cum seminibus introducta, et subspontanea facta.

A. VISNAGA (*L.*, *Schousb. Gew. Marok.* 116, sub *Dauco*; *Lam. Dict.* i. i. 132; *DC. Pr.* iv. 113).

Mar. sept.—Frequens circa Tanger! (*Webb Herb.*)! (*Schsb. l. c.*).

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia).

DEVERRA (*DC. Coll. Mém.* v. 45), = Pituranthos (*Viv. Fl. Lib. Spec.* 15, tab. 7).

D. SCOPARIA (*Coss. et Dur. in Bull. Soc. Bot. Fr.* ii. 248).

Mar. merid.—In convalle Amsmiz alt. circ. 1600 m.!

Specimina nostra nondum florentia, umbellis emarcidis anni præcedentis munita, Algeriensibus conformia.

Ar. Geog. Africa boreali-occidentalis interior.

D. juncea, *nob.*

A *D. scopario*, cui proxima, differt plurimis notis gravioribus. Caules e basi lignosa erecti simplices, nec ramosi; folia omnia ad laciniam unicam rigidam reducta, basin versus in vaginam brevem membranaceam amplexicaulem expansa; umbellæ terminalis radii 5–8 breves etiam fructiferi vix 6 mm. longi; involucro oligophyllo subpersistente, foliolo externo majore; involucellæ foliola ovato-lanceolata, margine membranacea; flores præsertim centrales brevissime pedicellati, pedicellis sub flore bracteolam latam cyathiformam gerentibus; petala sub anthesi arcte inflexa, nec expansa; styli longiusculi divergentes, demum adpresse recurvi.

Mar. merid.—In rupibus supra Seksaoua!

Planta singularis, pro subspecie *D. scopariæ* proposita, sed melius cognita verisimiliter pro specie omnino diversa habenda erit. Primo intuitu caulibus junciformibus, foliis ad laciniam unicam reductis, umbella contracta a cæteris *Deverris* distincta. Bracteolam sub flore cyathiformem vidi in *D. scoparia*, nec in aliis speciebus mihi cognitis.

CARUM (*L. Gen.* 365).

C. PETROSELINUM (*L.*, sub *Apio*; *Benth. et H. f. Gen. Pl.* i. 891),=Petroselinum sativum (*Hoffm. Umb.* i. 78; *DC. Pr.* iv. 102, *et auct. recent.*).

Mar. merid.—Subspontaneum in irrigatis ad urbem Marocco!

Ar. Geog. Herba diu culta, patriæ incertæ, videtur hodie subspontanea in regione Mediterranea.

C. RIDOLFIA (*Benth. et H. f. Gen. Pl.* i. 891),=Ridolfia segetum (*Moris, Fl. Sard.* ii. 212; *Boiss. Fl. Or.* ii. 858),=Anethum segetum (*Urv. Enum.* 33; *DC. Pr.* iv. 186, verisimiliter non *L.*).

Mar. sept.—Tanger! (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Satis frequens in arvis regionis inferioris. Prov. Shedma, prope Mskala! et alibi visum.

Ar. Geog. Per regionem Mediterraneam (inclusa Macaronesia) calidiorem late diffusum.

C. Ridolfia, habitu diverso, involucro et involucella deficientibus, videtur *C. Petroselino* nimis diversum ut in eandem sectionem generis enumerandum sit. Potius, ut nobis videtur, sectionem propriam sistit juxta *Trachysperma* collocandam.

C. DICHOTOMUM (*L. Mant.* 58, *et DC. Pr.* iv. 123, sub *Pimpinella*; *Benth. et H. f. Gen. Pl.* 891),=Ptychotis dichotoma (*Coss. MSS.*).

Mar. merid.—Ad radices Atlantis Majoris, supra Seksaoua! prope Tasseremout!

Ar. Geog. Hispania centralis. Algeria interior.

Herba sæpissime annua, pumila subspithamæa, interdum, ut videtur, fit biennis, e basi ramosissima. Involucrum et involucella desunt. Ex fructu ovato, breviter hispidulo, jugis obsoletis, forsan propior *Pimpinellæ* quam *Caro*. Folia trita gaudent odore *Apii graveolentis* fortissimo.

C. MAURITANICUM (*Boiss. et Reut. Pug.* 49; *Walp. Ann.* v. 65).

Mar. sept.—Tetuan in monte Beni Hosmar (folia tantum)! In monte Djebel Dersa (*Webb Herb.*)!

Mar. occid.—In collibus arenosis prov. Haha, in sylvis *Arganiæ* pluribus locis!

Mar. merid.—In reg. inferiore et media Atlantis Majoris. In convalle Aït Mesan circ. 1400 m.! In rupibus supra Seksaoua versus 1200 m.! In monte Djebel Tezah usque 2000 m. (folia tantum)!

Ar. Geog. Africa boreali-occidentalis.

C. mauritanicum a *C. incrassato* (Boiss. Voy. Esp. 711) distinguitur radiis fructiferis involucri vix incrassatis, stylopodio minore, et fructu breviore. His notis specimina ex sylvis arenosis *Arganiæ* prope Mogador intermedia sunt, et sensu nostro planta Mauritanica pro subspecie habenda est. *C. ferulæfolium* (Desf. Coroll. p. 55, tab. 43, sub *Bunio*; Boiss. Diagn. Pl. Or. ser. 1, x. 22), quocum conjungitur *C. divaricatum*, Koch, Syn. p. 315, differt involucro oligophyllo, carpophoro non incrassato, mericarpiis margine contiguis, stylopodio depresso, dentibus calycinis obsoletis. An hæ notæ diaguosticæ omnino constantes sint ulterius inquirendum est. In speciminibus nostris Atlanticis involucrum interdum 3–4-phyllum, et carpophorum vix incrassatum.

CARUM TENUIFOLIUM (*Benth. et H. f. Gen. Pl.* i. 891), = Geocaryum capillifolium (*Coss. Notes critiques sur quelques Plantes du Midi de l'Espagne*, p. 113, *et Walp. Ann.* iii. 900, quoad plantam Hispanicam et Tingitanam), = Bunium tenuifolium (*Salzm. Exsicc.*, *DC. Pr.* iv. 118); *non* Bunium capillifolium, *Bert.*, *nec* Myrrhis tenuifolia, *Guss.*

Mar. sept.—In monte Djebel Kebir prope Tanger (*Salzm. Exsicc.*)! specimen ex herb. Schousboe comm. cel. Cosson! Folia verisimiliter a nobis visa, sed nimis incerta.

Ar. Geog. Peninsula Iberica. Africa Tingitana.

De genere *Geocaryo* confer Benth. et H. f. *l. c.*: ab affinibus stylis rigidis erecto-divergentibus statim dignoscitur, sed invita natura a proximo *C. ferulæfolio*, Desf., generice separatur. Planta Italica a Bertoloni et Gussone memorata certe ad *Conopodium* referenda est. An species genuina Cossoniana intra fines Italiæ detecta sit non satis eminet. Involucrum in spec. nostro sæpius nullum, rarius monophyllum.

C. AMMOIDES (*L. Sp. Pl.*; *Gouan, Ill.* 16; *Schousb. Gew. Marok.* 124, sub *Seseli*; *Koch, Umbell.* p. 124, sub *Ptychotide*; *Benth. et H. f. Gen. Pl.* i. 892), = Seseli verticillatum (*Desf. Fl. Atl.* i. 260), = Ptychotis verticillata (*Dub. Bot. Gall.* 235; *DC. Pr.* iv. 108).

Mar. merid.—In collibus aridis prope urbem Marocco! "Raro legi in locis aridis" (*Schsb. l. c.*)

Ar. Geog. Species per regionem Mediterraneam occidentalem, exclusa Macaronesia, late diffusa, in Marocco, ut videtur, infrequens. Præter Græciam, ubi rarius occurrit, Orientem fugit.

Descriptio Linnæana, ut mos erat antiquorum, incompleta, sed satis conveniens, et ex loco natali certe huc referenda.

PIMPINELLA (*L. Gen.* 366).

P. TRAGIUM (*Vill. Fl. Dauph.* ii. 606; *DC. Pr.* iv. 121).

Mar. merid.—In regone media Atlantis Majoris. Spec. nondum florentia legimus in convalle Aït Mesan circ. 2000 m.! Specimina Atlantica florentia et fructifera benevole comm. cel. Cosson!

Ar. Geog. Species valde ludibunda per regionem omnem Mediterraneam (exclusa Macaronesia) late diffusa.

P. BUBONOIDES (*Brot. Fl. Lus.* i. p. 403; *DC. Pr.* iv. 121), var. VILLOSA, = P. villosa (*Schousb. Gew. Marok.* 125; *DC. Pr.* iv. 121).

Mar. sept.—In arenosis Tingitanis (*Schsb. l. c.*) spec. comm. Cosson! Folia mense Aprili in agro Tingitano pluries visa!

Mar. occid.—Mazagan!

Mar. merid.—Ad radices Atlantis Majoris pluribus locis. Sektana! Seksaoua! Milhain!

Ar. Geog. P. bubonoides in peninsula Iberica, Italia inferiore et Sicilia obvia est. *P. villosa,* nonnisi petalis villosis distinguenda, est forma propria ditionis Maroccanæ.

TINGUARRA (*Parlat. in Webb, Phyt. Canar.* ii. 156).

T. SICULA (*L., et DC. Pr.* iv. 155, sub *Athamantha*; *Benth. et H. f. Gen. Pl.* i. 897).

Mar. sept.—In monte Beni Hosmar prope Tetuan! (*Webb Herb.*)!

Mar. merid.—In collibus prope urbem Marocco (*G. Maw*)! In convalle Amsmiz circ. 1300 m.!

Ar. Geog. Africa borealis. Sicilia. Italia australis. Baleares.

SCANDIX (*L. Gen.* 357).

S. PECTEN VENERIS (*L., DC. Pr.* iv. 221).

Mar. sept.—Frequens in agro Tingitano! (*Webb Herb.*)! Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In regione inferiore et in convallibus Atlantis Majoris. Prov. Shedma! Tasseremout! In convalle Aït Mesan usque 1400 m. prope Amsmiz!

S. AUSTRALIS (*L., DC. Pr.* iv. 221; *Schousb. Gew. Marok.* 124).

Mar. sept.—In collibus regionis Tingitanæ (*Schsb. l. c.*). A nobís non visa.

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

FŒNICULUM (*Adans. Fam. Pl.* ii. 101).

F. VULGARE (*Gærtn. Fruct.* i. 105; *DC. Pr.* iv. 142), = Anethum fœniculum (*L., Schousb. Gew. Marok.* 125).

Mar. sept.—Visum pr. Tanger, forsan ex hortis aufuga!

Mar. occid.—Casa Blanca!

Mar. merid.—Mtouga!

—— ——, var. PIPERITUM (*Bertol. Am. Ital.* 21, sub *Anetho*; *DC. Pr. l. c.*).

Mar. occid.—Mazagan!

Mar. merid.—Satis frequens in regione inferiore. Prov. Shedma!

Ar. Geog. Species diu culta in Europa media; in regione Mediterranea, inclusa Macaronesia, late diffusa, et verisimiliter indigena.

Notæ diagnosticæ quibus *F. piperitum* et *F. dulce* a *F. vulgari* distinguuntur certe variabiles sunt. *F. piperitum* est forma australis, sed sæpe occurrunt specimina intermedia. Confer Lowe, Man. Fl. Mad. i. 359.

KUNDMANNIA (*Scop. Introd.* 115).

K. SICULA (*L.*, sub *Sio*; *DC. Pr.* iv. 143).

Mar. sept.—Tanger! Tetuan!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In convalle Aït Mesan!

Ar. Geog. Regio Mediterranea occidentalis, exclusa Macaronesia, fere semper in zona litorali. In Oriente nonnisi in insulis Creta, Zacyntho, Samo et Meli obvium.

MAGYDARIS (*Koch in litt.*; *DC. Coll. Mem.* v. 68).

M. TOMENTOSA (*Desf. Fl. Atl.* i. 249, sub *Cachryde*; *Koch in DC. Pr.* iv. 241).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Africa borealis. Sicilia. Sardinia.

M. PANACINA (*DC. Pr.* iv. 241),=Cachrys ambigua (*Salzm. Exsicc.*).

Mar. sept.—Tanger, folia tantum visa! (*Salzm. Exsicc.*)! Specimen ex herb. Schousboe cui scheda "*Cachrys tomentosa*," Schsb. non Desf. benev. comm. cel. Cosson!

M. ambigua (DC. Pr. *l. c.*),=*Cachrys ambigua* (Salzm. Exsicc.), videtur esse nil nisi lusus levis *M. panacinæ*.

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

CRITHMUM (*L. Gen.* 340).

C. MARITIMUM (*L.*, *DC. Pr.* iv. 164; *Schousb. Gew. Marok.* 118).

Mar. sept.—Juxta Cap. Spartel! (*Schousb. l. c.*).

Ar. Geog. Secus oras oceani Atlantici a Scotia usque Macaronesiam, et in litoribus Maris Interni totius.

ŒNANTHE (*L. Gen.* 352).

Œ. CALLOSA (*Salzm. Exsicc.*; *DC. Pr.* iv. 137).

Mar. sept.—Prope Tanger in dumetis et in monte Djebel Kebir! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Ar. Geog. Stirps, ut videtur, ditionis Tingitanæ propria.

Species *Œ. pimpinelloidi* affinis, videtur tamen rite distincta fructu maturo basi et apice (nec basi tantum) calloso, involucro subnullo (nec polyphyllo), foliorum radicalium circuitu oblongo-ovatorum segmentis latioribus, minus profunde incisis, isi sp. sequentis subsimilibus.

Œ. APIIFOLIA (*Brot. Fl. Lus.* i. 420; *DC. Pr.* iv. 137).

Mar. sept.—Prope Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir! Inter Tanger et Tetuan! Prope Tetuan secus flumen (1851)! Inter Tetuan et Ceuta!

Ar. Geog. Peninsula Iberica. Ditio Tingitana. Forma proxime affinis (subspecies?) in insula Madeira.

Œ. GLOBULOSA (*L.*, *DC. Pr.* iv. 138; *Schousb. Gew. Marok.* 120).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub "*Œ. calycina*")! (*Schsb. l. c.*). (*Webb Herb.*)! Tetuan ad ostium fluminis (1851)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

SCLEROSCIADIUM (*Koch in litt.*; *DC. Coll. Mem.* v. 43).

S. NODIFLORUM (*Schousb. Gew. Marok.* 120, sub *Œnanthe*), = S. humile (*Koch, DC. l. c.* tab. 2. fig. F; *DC. Pr.* iv. 140).

Mar. occid.—In uliginosis prope ostium rivuli Oued Kseb prope Mogador! (*Schsb. l. c.*). (*Balansa spec.* 1867)!

Ar. Geog. Species propria Imper. Maroccani austro-occidentalis.

Confer Benth. et H. f. Gen. Pl. i. 1009, in Addendis. Pace celebb. auctorum, qui specimina non viderunt, planta nostra a *Capnophyllo* (*Krubera*) non tantum specifice, quinetiam generice distinguenda est. Fructus ovato-globosus, in vivo lævis, exsiccatus tenuiter scaber, nullomodo compressus, jugis dorsalibus elevatis albis lateralia excedentibus; valleculæ profundæ univittatæ; commissura bivittata; carpophorum indivisum. Calycis dentes conici persistentes discreti. Styli in stylopodio elevato conico persistentes, demum divergentes. In *Capnophyllo* fructus ellipticus dorso insigniter compressus, juga dorsalia lateralibus multo minora, calycis dentes subobsoleti. In *C. africano* vittæ tenuissimæ, in *C. dichotomo* omnino obsoletæ.

In planta nostra umbella primaria inter folia radicalia subexscapa, sequentes in ramis lateralibus brevibus axillares vel terminales; involucri foliola parva angusta, tot quot radii, cito marcescentia; radii umbellæ valde inæquales; involucellæ foliola margine membranacea; flores in umbellula laterales breviter pedicellati, centrales subsessiles. Petala ex albo rubella. Radix verticalis indurata parce fibrillosa.

CAPNOPHYLLUM (*Gærtn. Fruct.* 32).

C. DICHOTOMUM (*Desf. Fl. Atl.* i. 245, tab. 66, sub *Conio*; *Lag. Gen. et Spec.* 13),=Tordylium peregrinum (*L. Mant.* 55),=Krubera leptophylla (*Hoffm. Umb.* 104; *DC. Pr.* 199; *Bertol. Guss. et fere omn. auct. recent.*),=Krubera peregrina (*Boiss. Fl. Or.* ii. 1027),=Ulospermum dichotomum (*Link, Enum. Hort. Bert.* i. 267).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! In clivo montis Djebel Kebir!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia) in zona litorali.

Nomen triviale Linnæanum, *Tordylio* perperam adsociatum, jure prioritatis gaudens, sed ab auctoribus, posterioribus neglectum, prætermisi. Planta Mediterranea a *Capnophyllo africano* affini invita natura in genus alienum segregata a Lagasca optimo jure suo loco restituta est.

MEUM (*Jacq. Fl. Aust.* iv. 2).

M. ATLANTICUM (*Coss. MSS.*).

Mar. merid.—In monte Djebel Tezah, alt. circ. 2700 m. legi spec. foliis tantum donatum! cui nomen *M. nevadense*, Boiss., non sine dubio affixi. Postea cel. Cosson benevole communicavit spec. pariter foliaceum cui scheda *Meum? atlanticum*, Coss. Fere certe in grege *M. athamantici* collocanda, species adhuc dubia est.

FERULA (*L. Gen.* 343).

F. COMMUNIS (*L., DC. Pr.* iv. 172).

Mar. sept.—? Specimen cui scheda "*Thaspia?*" ex monte Beni Hosmar prope Tetuan exstat in herb. Webb, et hujus frustulum mihi benevole concessit cel. Parlatore. Ex caule tereti cæterisque notis planta Webbiana certe ad *F. communem* sive *F. glaucam* referenda est, priori magis conveniens. In recensione herbarii Mauritanici beati Webb, cel. Cosson *F. sulcatam*, Desf., ex monte Beni Hosmar enumeravit. Hujus specimina non vidi in herb. Webb.

Mar. occid.—Prope Casa Blanca vidimus caules exsiccatos *Ferulæ* cujusdam, verisimiliter *F. communis*, ad hortorum sepimenta ab incolis adhibitos.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

F. TINGITANA (*L., DC. Pr.* iv. 173).

Mar. sept.—Prope Tanger!

Specimina duo legi mense Junio fructu nondum maturo, umbellis centralibus pedunculis 5–6-pollicaribus suffultis. Ludunt involucris et involucellis nullis, vel in altero specimine involucro 3–4-phyllo, foliolis longiusculis setaceis, et involucellis polyphyllis foliolis brevibus setaceis.

Ar. Geog. Africa borealis. Oriens.

PEUCEDANUM (*L. Gen.* 339).

P. MUNBYI (*Boiss. Diag. Pl. Or.* ser. 2, ii. 89).

Mar. sept.—Specimina valde incompleta fructu nondum maturo prope Tingidem legit beatus Schousboe die 13 Septembris 1802. Frustula plantæ parum cognitæ benevole comm. cel. Cosson!

Ar. Geog. Nonnisi in Algeriæ prov. Oran et prope Tingidem hucusque detectum. Monente cel. Boissier folia fert Martio, flores Septembri vel Octobri, fructus Decembri. In grege *P. Chabræi* collocandum.

HERACLEUM (*L. Gen.* 345).

H. SPHONDYLIUM (*L., DC. Pr.* iv. 192).

Mar. merid.—In regione alpina Atlantis Majoris. Folia legimus in jugo Tagherot circ. 2700 m.! Specimina fructifera in monte Djebel Afougueur ab indigeno Ibrahim lecta comm. cel. Cosson!

Ar. Geog. Europa media et borealis. Species vel formæ proxime affines in montibus regionis Mediterraneæ (exclusis Macaronesia et Asia Mediterranea).

CORIANDRUM (*L. Gen.* 356).

C. SATIVUM (*L., DC. Pr.* iv. 250).

Mar. sept.—Prope Tanger inter segetes!

Ar. Geog. Species regionis Mediterraneæ orientalis, ut videtur, indigena, alibi in temperatis calidioribus inquilina, deest in Macaronesia.

BIFORA (*Hoffm. Umb.* 191).

B. TESTICULATA (*L.*, sub *Coriandro*; *Spreng. in Schult. Syst.* vi. 38).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan circ. 1300 m.!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

DAUCUS (*L. Gen.* 333).

D. MURICATUS (*L., DC. Pr.* iv. 210).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan! (*Webb Herb.*)!

Mar. merid.—Sektana (*Rein et Fritsch, spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea occidentalis. Græciæ dubia civis. Deest in Macaronesia.

D. SETULOSUS (*Guss. in DC. Pr.* iv. 211), var.?

Mar. merid.—Ad radices Atlantis Majoris juxta Tasseremout circ. 1200 m.!

Ar. Geog. Species per regionem Mediterraneam orientalem diffusa. In Africa Tunetana legit Kralik, ex Africa boreali-occidentali (nostris exceptis) specimina non vidi.

Specimina nostra pilis longis mollibus vestita ostendunt umbellam primariam centralem pedunculo brevi pollicari suffultam, ramis lateralibus spithamæis superatam. Forsan melius cognita pro specie diversa habenda erit.

DAUCUS PARVIFLORUS (*Desf. Fl. Atl.* i. 241, tab 60; *DC. Pr.* iv. 211).
Mar. sept.—Tanger!
Ar. Geog. Africa boreali-occidentalis. Fertur in insulis Canariensibus, sed spec. Bourgæana *D. parviflori*, "No. 401. Ex insula Canaria" inter formas *D. Carotæ* enumeranda sunt. Confer Lowe, Man. Fl. Mad. i. 368. Specimina genuina ex Europa non vidi.
Huc verisimiliter *D. mauritanicus* (Schousb. Gew. Marok. 116).

D. CAROTA (*L.*, *DC. Pr.* iv. 211).
Mar. occid.—In arenosis pr. Mogador!
Ar. Geog. Europa omnis (exclusa arctica). Regio omnis Mediterranea. Sibiria. Abyssinia.
Qui *D. maximum* pro specie rite diversa habebit specimina nostra forsan inter hujus formas minores enumerabit.

D. maximus (*Desf. Fl. Atl.* i. 241; *DC. Pr.* iv. 212).
Mar. sept.—Tanger (*Webb Herb.*)!
Mar. occid.—Casa Blanca! Mogador (*Lowe*). Agadir (*Coll. Indig.* 1871)!
Mar. merid.—Frequens in regione inferiore. Legimus prope Mskala in prov. Shedma! et pluribus locis prov. Mtouga!
Ar. Geog. Regio Mediterranea fere omnis. Specimina genuina ex Macaronesia non vidi.
D. maximus nullis notis diagnosticis stabilibus a *D. Carota*, specie quam maxime polymorpha, separatur, et inter hujus subspecies sine dubio enumeravi. Primo intuitu tamen a *D. Carota* Europæ mediæ valde diversus videtur. Caulis elatus 4–5-pedalis magis ramosus est, foliorum segmenta latiora, involucrum præ magnitudine umbellæ minus. Ludit radiis umbellæ plus minusve elongatis, petalis albis vel læte rubellis, exterioribus quam cætera multo majoribus, vel ea paulo superantibus. Umbellula centralis fere semper gaudet flore uno alterove abortivo atropurpureo, vel fere nigro. Confer Boiss. Fl. Or. ii. 1076.

D. GINGIDIUM (*L.*, *DC. Pr.* iv. 211), = D. Hispanicus (*Gouan, Ill.* p. 9), = D. gummifer (*Lam. Dict.* i. 634), = D. maritimus (*With. Arr. Brit.* 290, *non Lam.*, *non Gaertn.*).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)!
Mar. occid.—Saffi!
Ar. Geog. In litore Atlantico Europæ et Africæ borealis, et circum mare Mediterraneum late diffusus, præsertim in rupestribus.
Cll. Grenier et Godron (Fl. Fr. i. 669) *D. Gingidium* et *D. gummiferum* accurate definierunt, sed, ut mihi videtur, notæ diagnosticæ fallaces sunt, dum specimina intermedia nimis frequentia transitum præbent. Immo mihi valde dubium est, an hic a *D. Carota* satis distinctus, vel

melius ad subspeciem reducendus sit. Specimina nostra Tingitana nimis immatura cum spec. genuinis Calpensibus bene congruunt.

—— ——, var. HISPIDUS, *nob.*,=D. hispidus (*Desf. Fl. Atl.* i. 243, tab. 63; *DC. Pr.* iv. 217; *Schousb. Gew. Marok.* 117).

Mar. occid.—In arenosis prope Mogador (*Schsb.*).

Mar. merid. ?—Prov. Mtouga! Specimen dubium a *D. maximo* petalis parvulis subæqualibus, radiis umbellæ fructiferæ vix inflexis diversum, et spec. Algeriensibus *D. hispidi* congruens.

D. hispidus a *D. Gingidio* (sensu latiore) nullis notis stabilibus separatur, et mihi videtur esse hujus forma procerior, in locis a mare remotis enata.

Sicut occurrit etiam in *D. Gingidio*, flores centrales interdum abortivi sunt et fiunt atropurpurei.

DAUCUS AUREUS (*Desf. Fl. Atl.* i. 242, tab. 61).

Mar. occid.—In maritimis prope Mazagan!

Ar. Geog. Per regionem Mediterraneam fere omnem (inclusa Macaronesia) diffusus, sed potius rarus.

Specimen nostrum unicum incompletum et ideo haud omnino certum.

D. CRINITUS (*Desf. Fl. Atl.* i. 242, tab. 62).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! (Ex herb. Schousboe sub "*D. verticillatus*") *Coss. spec.*!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)! folia tantum sed fere certa.

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

D. PUMILUS (*Gouan, Fl. Monsp.* 285, *et Schousb. Gew. Marok.* 115, sub *Caucalide*), =D. muricatus, var. maritimus (*L. Sp. Pl.* 349),=D. maritimus (*Gaertn. Fruct., non Lam. nec With.*),=Orlaya maritima (*Koch, Umbell.* 78; *DC. Pr.* iv. 209, et plurim. auct. recentiorum).

Mar. sept.—Tanger! (*Schsb. l. c.*) Cap. Spartel! Inter Tetuan et Ceuta!

Mar. occid.—Casa Blanca! Mazagan! Mogador!

Ar. Geog. Regio omnis Mediterranea in maritimis.

Ducibus celebb. Benth. et H. f. hanc speciem cum affinibus (*Orlaya*, Koch) ad *Daucum* revocavi.

CAUCALIS (*L. Gen.* 331; *Benth. et H. f. Gen. Pl.* i. 928).

C. LATIFOLIA (*L.*, sub *Tordylio*; *Sm. Eng. Fl.* ii. 41),=Turgenia latifolia (*Hoffm. Umbell.* 59; *DC. Pr.* iv. 218).

Mar. merid.—Videtur satis frequens in convallibus inferioribus et ad radices Atlantis Majoris. Mesfioua! Inter Tasseremout et Ourika! Gurguri! In convalle Aït Mesan circ. 1400 m.!

Ar. Geog. Europa media. Asia temperata. Regio omnis Mediterranea (exclusa Macaronesia).

C. DAUCOIDES (*L.*, *DC. Pr.* iv. 216).

Mar. merid.—In convalle Amsmiz circ. 1500 m.!

Ar. Geog. Europa media et australis. Oriens. Ex Africa non vidi.

CAUCALIS LEPTOPHYLLA (*L., DC. Pr.* iv. 216).

Mar. merid.—Frequens in planitie et in regione media et inferiore Atlantis Majoris. Prov. Shedma! Prope Ourika! Seksaoua! Reraya! In convalle Aït Mesan a 1200 m. usque 2200 m.! et in convalle Amsmiz a 1000 m. usque 1800 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Europa media hinc inde introducta.

—— ——, var. **HETEROCARPA**, *nob.* Mericarpio exteriore longe aculeato sterili, interiore breviter muricato fertili.

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Eodem modo variat etiam *C. nodosa.* Confer DC. Prod. iv. 219. An ab hac satis differt *C. bifrons*, Coss. et Dur.?

C. cærulescens (*Boiss. Elench.* 97; *Walp. Repert.* ii 420).

Mar. merid.—In convalle Aït Mesan circ. 1300 m.! Prope Tasseremout (specimina nimis immatura)! Distr. Reraya!

Ar. Geog. Hispania Granatensis. Marocco meridionalis.

Specimina ex Reraya intermedia sunt. Forsan melius pro varietate *C. leptophyllæ* habenda.

C. NODOSA (*L.*, sub *Tordylio*; *Huds. Fl. Angl.* 114; *Schousb. Gew. Marok.* 116), = Torilis nodosa (*Gaertn. Fruct.* i. 82; *DC. Pr.* iv. 219).

Mar. sept.—Tanger (*Schsb. l. c.*). Cap. Spartel! Ex collibus inter Tanger et Tetuan! Prope Tetuan (1851)!

Mar. occid.—Ex prov. Haha prope Mogador!

Lusum umbellis pedunculatis prope Tanger legit J. D. H.!

—— ——, var. **HETEROCARPA**, *nob.*

Mar. occid.—Casa Blanca!

Ar. Geog. Species per Europam mediam et regionem omnem Mediterraneam late diffusa et indigena, in Americam australem aliasque terras longinquas introducta est. Var. *heterocarpa* cum specie hinc inde obvia est.

C. INFESTA (*L.*, sub *Scandice*; *Curt. Fl. Lond.* vi. tab. 23), = Torilis infesta (*Hoffm. Umb.* 89; *Boiss. Fl. Or.* ii. 1082), = Caucalis helvetica (*Jacq. H. Vind.* iii. tab. 16), = Torilis helvetica (*Gmel. Fl. Bad.* i. 617; *DC. Pr.* iv. 219).

Mar. merid.—In hortis ac ruderatis urbis Marocco! Prope Mzouda (*J. D. H.*)!

Ar. Geog. Europa media. Regio omnis Mediterranea. Specimina ex Macaronesia quæ vidi, ad var. sequentem referenda sunt.

—— ——, var. **NEGLECTA**, = Torilis neglecta (*Schultes, Syst.* ii. 484; *DC. Pr.* iv. 218).

Mar. sept.—Legi florentem et fructiferam prope Tanger die 13 Junio 1871!

Hanc pro specie distincta habuerunt summi botanici A. P. De Candolle, G D. Koch et Boissier, dum accuratus Bertoloni (Fl. It. iii. 188) pro synonymo *C. infestæ* enumeravit. Distinguitur etenim statura majore, foliorum segmentis latioribus, petalis radiantibus majoribus, fructu majore, et stylis stylopodio pluries longioribus, nec paulo excedentibus. Hæ notæ omnes tamen, præsertim in Italia superiore, summopere variabiles, et formæ intermediæ sæpe obviæ sunt. Ut morem gererem magistris, plantam Tingitanam foliis et habitu *C. infestæ* simillimam, sed petalis exterioribus majusculis, fructu majore et stylis longis insignem, pro varietate *C. infestæ* enumeravi. Specimen unum habitu graciliore umbellis longe pedunculatis pauciradiatis ad sequentem accedit.

Caucalis heterophylla (*Guss. Prod. Fl. Sic.* i. 326 ; *DC. Pr.* iv. 219).
Mar. sept.—? Tanger (*Webb Herb.*) !
Ar. Geog. Hinc inde in regione Mediterranea.
Specimen Webbianum subdubium et, ut mihi videtur, inter varietates *C. infestæ* enumerandum. Cæterum sp. Gussoniana *C. infestæ* nimis affinis et pro subspecie enumeranda est.

THAPSIA (*L. Gen.* 361).

T. GARGANICA (*L., DC. Pr.* iv. 202 ; *Schousb. Gew. Marok.* 124).
Mar. sept.—Tanger ! (*Salzm. Exsicc.*) ! (*Webb Herb.*) ! (*Schsb. l. c.*). Inter Tanger et Tetuan !
Mar. occid.—Casa Blanca ! Mogador (*Schsb. l. c.*).
Ar. Geog. Regio Mediterranea calidior. Deest in Gallia, in Italia media et boreali, et in Macaronesia.

T. VILLOSA (*L., DC. Pr.* iv. 202).
Mar. sept.—In monte Beni Hosmar prope Tetuan !
Mar. merid.—Ad radices Atlantis Majoris sat frequens. Ourika ! Reraya ! Sektana ! et alibi visa !
Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Gallia Mediterranea.
Specimen ex monte Beni Hosmar foliis radicalibus tantum donatum, sed ob nervorum dispositionem singularem satis certum !

ELÆOSELINUM (*Koch in DC. Pr.* iv. 215).

E. MEOIDES (*Desf. Fl. Atl.* i. 253, tab. 69, sub *Laserpitio* ; *Koch, l. c.*), =Thapsia meoides (*Guss. Prod. Fl. Sic.* i. 370).
Mar. sept.—Tanger ! (*Salzm. Exsicc.* sub "*Laserpitium meiodes*") ! (Ex herb. Schousboe sub "*Ferula meoides*"), *Coss. spec.* ! (*Webb Herb.*) !
Mar. merid.—Mesfioua ! Mzouda ! Aït Mesan circ. 1400 m. !
Ar. Geog. Regio Mediterranea occidentalis. Sardinia. Sicilia. Hispania. Africa borealis.

E. humile, *nob.*
Proximum *E. meoidi* et verisimiliter sicut subspecies enumerandum,

differt tamen notis insignibus. Statura multo minor; caules 6–12-pollicares; folia fere omnia radicalia subspithamæa, caulina ad vaginas amplas sæpissime reducta; umbella subexinvolucrata, foliolis 1–2 cito deciduis; involucellæ ex foliolis parvis setaceis deciduis. Styli florum fertilium, tam in hoc quam in *E. meoide*, recti divergentes demum recurvi.

Mar. merid.—In aridis saxosis regionis inferioris. In prov. Shedma prope Aïn Oumast et alibi!

ELÆOSELINUM EXINVOLUCRATUM (*Coss. in Bull. Soc. Bot. Fr.* xx. 247). Sequitur descriptio Cossoniana:—

"Planta perennis caudice crassiusculo fruticescente descendente superne *fibrillis* petiolorum emarcidorum vestigiis *dense vestito*, caulem unicum emittente. Caulis ut tota planta glaber, glaucescens, gracilis, striatus, superne ramosus, paucifolius. *Folia* glauca, pleraque radicalia, ambitu triangularia, petiolata, petiolo inferne in vaginam margine membranaceam dilatato, *tripinnatisecta* partitionibus petiolulatis, *lobis* crassiusculis brevibus *ovatis, inferioribus* saltem *pinnatilobis lobulis abbreviatis obtusis*, caulina inferiora pauca subconformia petiolo in vaginam amplam dilatato, superiora sæpe ad vaginam ovatam reducta. *Umbellæ* longe pedunculatæ, 5–6-*radiatæ* radiis subæqualibus gracilibus teretibus lævibus, omnes fertiles in umbellula quaque permixtis floribus sterilibus pluribus. *Involucrum nullum. Involucella oligophylla, foliolis* linearibus inæqualibus *citissime deciduis.* Umbellulæ 7–9-floræ, pedicellis subæqualibus, demum flore longioribus. Calyx breviter 5-dentatus, dentibus latiusculis. *Petala lutea, integra, ovata, in lacinulam* linearem *introflexam acuminata.* Stylopodia crassa, depressa. *Styli* post anthesin divergentes, *latitudini stylopodiorum subæquilongi.* Ovarium læve, glabrum, campanulato-obconicum, jugis haud distinctis."

Mar. merid.—Prope Keira, alt. circ. 1000 m., legit Balansa anno 1867. Caudicem unicum foliis radicalibus donatum legi supra Seksaoua, et specimen mancum fructiferum ex rupibus præruptis avulsi!

Fructus maturus egregio auctori incognitus major est quam in sp. affinibus. Mericarpia sæpissime inæqualia, alterum alis minus evolutis præditum. Alæ perfectæ latæ purpurascentes nitentes late expansæ, utrinque truncatæ, superne angulum obtusum, basi angulum acutum formantes. Stylopodium ex angulo obtuso inter alas exsertum; umbella primaria in spec. nostro decemradiata, laterales (floribus omnibus abortivis) 12-radiatæ.

Hæc species, cui proxima *E. Lagascæ*, Boiss. (*Thapsia tenuifolia*, Lag.), differt caudice fibrillis dense vestito, foliis glaucis crassioribus, umbellis pauciradiatis, involucro nullo, nec polyphyllo, involucellis oligophyllis cito deciduis, nec polyphyllis persistentibus, stylis denique brevioribus.

ELÆOSELINUM FŒTIDUM (*L., et DC. Pr.* iv. 203, sub *Thapsia*; *Boiss. Elench.* 91).

Mar. sept.—Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*, sub "*Thapsia polygama*")! (*Herb. Schousboe*, sub "*T. fœtida*"), *Coss. spec.*! Prope Tetuan!

Ar. Geog. Hispania. Africa borealis.

In convalle Aït Mesan, alt. circ. 1400 m. legit cel. J. D. Hooker folia *Umbelliferæ* cujusdam omnino incertæ, *Physospermum aquilegifolium*, Koch referentia, sed ab hoc certe diversa. Planta ulterius inquirenda.

ARALIACEÆ (*Juss. Dict.* ii. 348).

HEDERA (*L. Gen.* 283, *ex parte*).

H. HELIX (*L., DC. Pr.* iv. 261).

Mar. sept.—Prope Tanger in monte Djebel Kebir! In monte Beni Hosmar prope Tetuan!

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan!

Ar. Geog. Europa media. Asia temperata. Japonia. Regio Mediterranea fere omnis. Var. *canariensis* in Macaronesia.

CAPRIFOLIACEÆ (*Juss. Gen.* 110).

SAMBUCUS (*L. Gen.* 372).

S. EBULUS (*L., DC. Pr.* iv. 322; *Schsb. Gew. Marok.* 133).

Mar. sept.—Tanger (*Schsb. l. c.*).

Ar. Geog. Europa temperata. Regio fere omnis Mediterranea, inclusa Madeira.

S. NIGRA (*L., DC. Pr.* iv. 322).

Mar. merid.—In convalle Aït Mesan a 1500 m. usque 1800 m.! Visa etiam in convalle Amsmiz!

Ar. Geog. Europa media. Montes Europæ australis et Asiæ Mediterraneæ. Ex Africa non vidi. Deest in Macaronesia.

VIBURNUM (*L. Gen.* 370).

V. TINUS (*L., DC. Pr.* iv. 324; *Schousb. Gew. Marok.* 130).

Mar. merid.—In convalle Amsmiz circ. 1400 m.!

Ar. Geog. Regio Mediterranea fere omnis. In Oriente rarissime occurrit. In Macaronesia adest tantum sp. affinis *V. rugosum*, Pers.

—— ——. Var. corymbis laxioribus, floribus majoribus, foliis utrinque glabris superne lucidis. An idem ac *V. lucidum*, Mill.? Huc ducenda forma a Schousboe enumerata?

Mar. sept.—In monte Djebel Kebir, et alibi prope Tanger!

LONICERA (*L. Gen.* 233).

L. ETRUSCA (*Santi, Viagg.* i. 113, tab. 1; *DC. Pr.* iv. 331),=L. caprifolium (*Schousb. Gew. Marok.* 73, *non L.*).

Mar. sept.—"In sepibus prope Tingidem raro" (*Schsb.*).

Mar. merid.—In convalle Aït Mesan 1200–1400 m.!

In planta Atlantica corollæ tubus glandulis breviter stipitatis plus minus adspersus, folia præsertim juniora (etiam in pagina superiore) pilosa, caules subglaberrimi. Flores ex roseo lutescentes, odoratissimi.

Ar. Geog. Regio Mediterranea fere omnis. Floræ Maderensis civis, desideratur in ins. Canariensibus.

LONICERA IMPLEXA (*Ait. H. Kew.* i. 231 ; *DC. Pr.* iv. 331).

Mar. sept.—Tanger in monte Djebel Kebir et alibi!

Mar. occid.—Haud procul Mogador versus Aïn el Hadjar frustulum legit J. D. H.!

Mar. merid.—Prope Ourika ad radices Atlantis Majoris! Reraya (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Europa australis. Africa boreali-occidentalis. Bithynia (*sec.* Boissier). Legi pr. Smyrnam.

L. PERICLYMENUM (*L.*, *DC. Pr.* iv. 331), var. HISPANICA,=L. hispanica (*Boiss. et Reut. Pug.* 52; *Walp. Ann.* v. 95),=L. Periclymenum (*Schousb. Gew. Marok.* 74).

Mar. sept.—Tanger in monte Djebel Kebir et alibi! (*Webb Herb.*)! (*Schsb. l. c.*). In sepibus prope Tetuan!

Ar. Geog. Species in Europa media et Scandinavia meridionali obvia. In Europa australi infrequens. Fertur in Græcia, sed ex Oriente spec. nulla vidit Boissier. In Africa boreali-occidentali rarius occurrit.

Notæ quibus distinguitur *L. hispanica* mihi videntur omnino fallaces. Indumentum in spec. nostris Tetuanensibus parce et vix glandulosum. Folia variant latiora vel angustiora utrinque acuta, omnia petiolata vel suprema subsessilia. Dentes calycini aliquantulum longiores quam in spec. normalibus *L. Periclymeni.*

L. BIFLORA (*Desf. Fl. Atl.* i. 184, tab. 52),=L. canescens (*Schousb. Gew. Mar.* 74 ; *DC. Pr.* iv. 334).

Mar. occid.—Aïn el Hadjar haud procul Mogador! Prope Mogador (*Schsb. l. c.*). Pr. Sallé (*Broussonnet ex Cavan. Anal. Cienc. Nat.*).

Mar. merid.—Sheshaoua! In umbrosis et hortis ad urbem Marocco! Reraya!

Ar. Geog. Species Maroccana et Algeriensis. Fertur etiam in Sicilia (*fide Gussone*).

Nomen Fontanesianum fere eodem tempore publici juris factum ac Schousboeanum. Ipse Schousboeus tamen *L. bifloram* sicut synonymon *L. canescentis* citat, et prioritatem agnovit.

RUBIACEÆ (*Juss. Gen.* 196).

PUTORIA (*Pers. Syn.* i. 524).

P. CALABRICA (*L. fil., Suppl.* 120, sub *Asperula*; *Pers. l. c.*; *DC. Pr.* iv. 577).

Mar. sept.—Tetuan (1851)!

Mar. merid.—In convalle Aït Mesan 1200–1400 m.!

Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia). Ultra latit. gradum 40_{mum} vix se protendit nisi in litore Dalmatico et litoralis Austriaci, ubi usque Fiume obvia est.

Folia et corollæ tubus longitudine valde variabilia sunt. *P. Hispanica*, Boiss. Diagn. ser. 2, ii. 108, sistit formam foliis angustioribus longioribus, corollæ tubo elongato. Hujus specimina juxta Arundam (Ronda) et in montibus Sierra Nevada a me lecta videntur a typo satis diversa, sed formas intermedias vidi et legi prope Malaga. Specimina Oranensia ad var. *hispanicam* referenda sunt. Contra quæ legimus in Atlante Majore folia quam in typo breviora ostendunt.

CALLIPETIS (*Stev. Obs. Pl. Ross.* 69).

C. CUCULLARIA (*L.*, sub *Valantia*; *DC. Pr.* iv. 613).

Mar. merid.—Prope Amsmiz! In convalle Amsmiz usque 1500 m.! Seksaoua!

Ar. Geog. Per regionem Mediterraneam calidiorem et sicciorem ex Afghanistan usque territ. Maroccanum. In Europa nonnisi in Hispania centrali hucusque visa.

VAILLANTIA (*DC. Fl. Fr.* iv. 266),=Valantia (*L., ex parte*).

V. MURALIS (*L.*, sub *Valantia*; *DC. l. c.*, *Prod.* iv. 614).

Mar. sept.—In saxosis prope Tetuan! et in monte Beni Hosmar!

In spec. nostris caules et folia juniora ciliata.

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

RUBIA (*L. Gen.* 127).

R. TINCTORUM (*L.*, *DC. Pr.* iv. 589; *Schousb. Gew. Marok.* 46).

Mar. merid.—In convalle Aït Mesan supra pagum Arround ultra 2000 m. s. m., verisimiliter introducta!

Sec. Schsb. l. c. frequens in sepibus et vepretis totius Imperii.

Species verisimiliter in regione Mediterranea indigena, diu culta et sæpe subspontanea facta. Imperii Maroccani dubia civis. A *R. peregrina*, ut mihi videtur, probe diversa.

R. PEREGRINA (*L.*, *DC. Pr.* iv. 589),=R. peregrina β intermedia (*Gren. et Godr. Fl. Fr.* ii. 13).

Mar. sept.—Tanger! Inter Tanger et Tetuan! In rupestribus pr. Tetuan!

Mar. merid.—Ourika! In convalle Aït Mesan!

—— ——, var. LUCIDA (*Webb Phyt. Can.* ii. 187),=R. lucida (*L.*, *DC. Pr.* iv. 590; *Schousb. Gew. Mar.* 46).

Mar. sept.—Prope Tanger in clivis maritimis!

Mar. occid.—Saffi (*Schsb. l. c.*).

Foliis in verticillo plerumque senis, quam in typo latioribus, apice rotundatis, caule lævi, videtur satis diversum; sed adsunt formæ intermediæ, et ducibus Cambessèdes, Webb, Grenier et Godron, hanc et sequentem ad varietates reduxi.

—— ——, var. ANGUSTIFOLIA (*Webb, l. c.*),=R. angustifolia (*L., DC. Pr.* iv. 589),=R. longifolia (*Poir. Suppl.* ii. 703; *DC. Pr. l. c.*), =R. peregrina (*Schousb. Gew. Mar.* 46),=R. Requienii (*Duby, Bot. Gall.* i. 247).

Mar. sept.—Prope Tetuan (*Webb Herb.*)!

Mar. occid.—Mogador (*Lowe*).

Mar. merid.—Sheshaoua! In convalle Aït Mesan circ. 1200 m.! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Species Europam occidentalem ab Hibernia usque Fretum Herculis et regionem omnem Mediterraneam (inclusa Macaronesia) incolit. Fugit terras continentales. Varietates plurimæ per regionem Mediterraneam obviæ sunt.

R. fruticosa, species propria Canariensis fertur inter plantas Mogadorenses a Broussonnet lectas, ex indicatione loci natalis erronea.

GALIUM (*L. Gen.* 125).

G. ELLIPTICUM (*Willd. Enum. Suppl.* 1813; *DC. Pr.* iv. 599).

Mar. sept.—? In monte Beni Hosmar prope Tetuan legimus frustula pl. nondum florentis, fere certe huc referenda!

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia). Confer Lowe, Man. Fl. Mad. pp. 388 et seq.

G. POIRETIANUM, *nob.*,=Rubia lævis (*Poir. Voy.* ii. 111; *DC. Pr.* iv. 589, *non Thunb.*).

Mar. merid.—Ad radices Atlantis Majoris sat frequens. Mesfioua! Reraya! Aït Mesan! Mzouda!

Ar. Geog. Africa boreali-occidentalis.

Hanc speciem ad *Galium* referendam esse jam suspicatus est ill. A. P. De Candolle, nec video quo pacto a subgenere *Eugalium*, § *Leiogalium* divellenda sit. A *Rubiis* corolla quadrifida, fructus indumento aliquanto coriaceo, nec carnoso, recedit: *Leiogaliis* inflorescentia paniculata multiflora, foliis a basi sensim decrescentibus, et habitu toto convenit, *G. lævigato*, L., proxime collocandum.

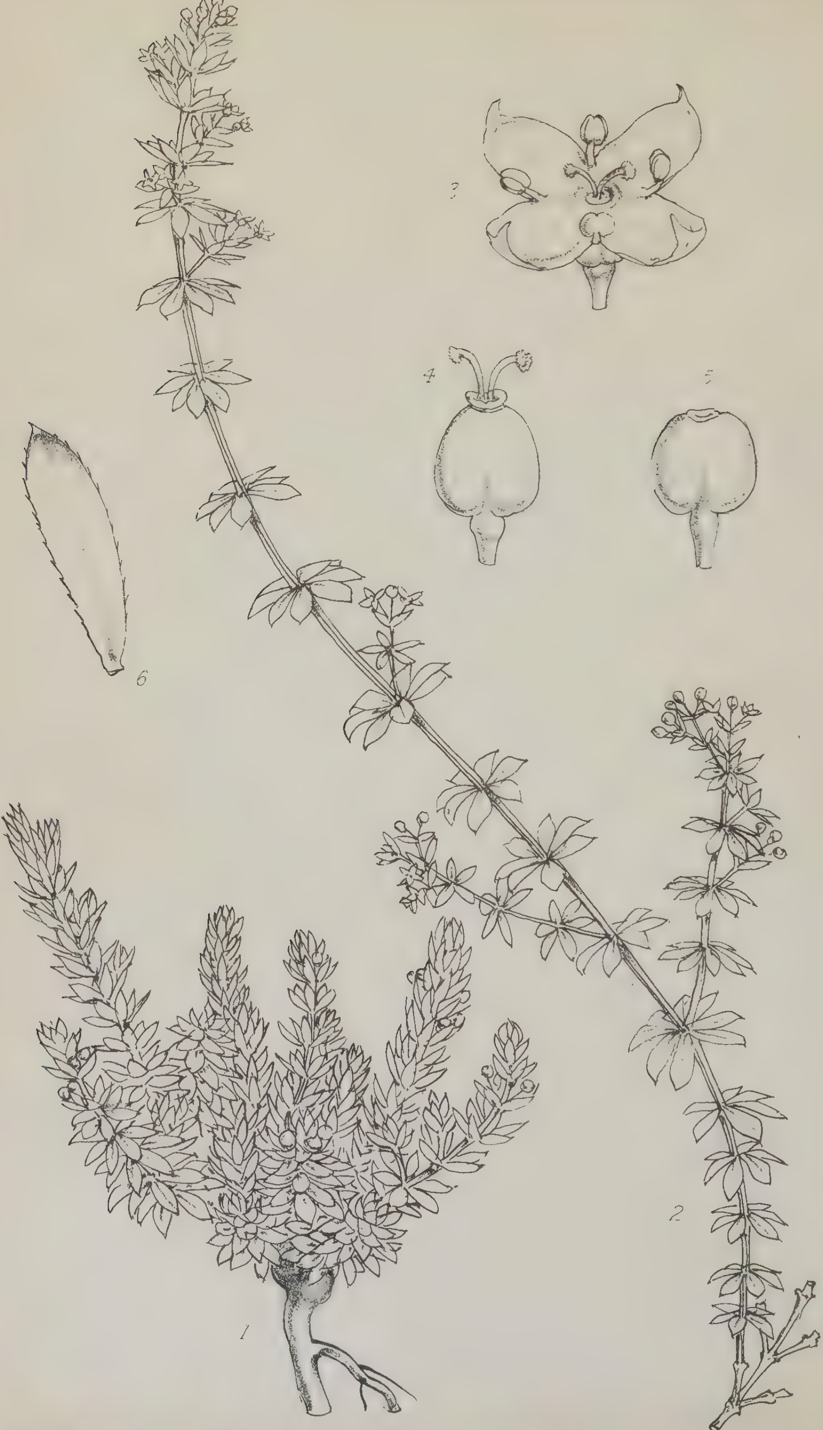
G. ERECTUM (*Huds. Fl. Angl.* 68; *DC. Pr.* iv. 595), var. RIGIDUM,= G. rigidum (*Vill. Dauph.* ii. 319).

Mar. merid.—Specimen unicum legi in rupibus supra Milhaïn!

Ar. Geog. Europa media. Regio Mediterranea fere omnis. Deest in ins. Canariensibus. Species affinis (G. *productum*, Lowe) in Madeira frequens.

G. CORRUDÆFOLIUM (*Vill. Dauph.* ii. 320),=G. lucidum (*All. Fl. Ped.* No. 21, tab. 77. fig. 2).

Mar. merid.—In monte Djebel Tezah circ. 2200 m. vix florens! Specimina florentia ex Atlante Majore benevole dedit cel. Cosson.



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GALIUM ACUMINATUM *Ball.*

Fitch imp.

Ar. Geog. Species per Galliam australem, Hispaniam, valles calidiores Alpium, et totam Italiam vulgaris. Sec. Boissier deest in Oriente, sed adsunt plurimæ species affines. In hoc grege ut in eo *G. sylvestris* limites specierum vix notis stabilibus definiendi.

Galium aureum (*Vis. Ind. Ort. Padov.* 1842; *Boiss. Fl. Or.* iii. 61),= G. melanantherum, var. latifolium (*Boiss. Diagn. Pl. Or.* ser. 1, vi. 69).

Mar. merid.—In rupibus supra Seksaoua!

Ar. Geog. In Oriente (sec. Boissier) late diffusum, et in Dalmatia obvium. Verisimiliter provenit in Algeria et alibi in Africa boreali.

Specimina majora nostra pl. Orientali omnino convenire videntur. Alia minora in monte supra Seksaoua lecta propiora videntur formæ nanæ *G. corrudæfolii.* Pace cel. Boiss. qui hanc speciem inter *Chromogalia G. vero* proxime collocavit, mihi videtur valde affinis *G. corrudæfolio*, et sicut hujus subspecies enumeranda.

G. SYLVESTRE (*Poll. Palat.* i. 151; *Koch, Syn. Fl. Germ.* i. 286),= G. Bocconi (*DC. Pr.* iv. 594, *non All.*), var. ATLANTICUM, *nob.*,=G. atlanticum (*Ball in Journ. Bot.* 1873, 334).

Differt imprimis foliis surculorum sterilium et caulinis inferioribus abbreviatis obovato-acuminatis longiuscule mucronatis, interdum in pagina superiore scabris margine aculeolatis. Corolla parva gaudet segmentis acutis; antheræ ochroleucæ. Panicula cymiformis trichotomo-cymosa. Planta pumila, 3–4-pollicaris, laxe cæspitosa.

Mar. merid.—In regione superiore Atlantis Majoris. Legi in jugo Tagherot usque 2700 m.!

Exemplaria nostra fructu carent et ideo incerta sunt. Habui pro subspecie *G. sylvestris*; hodie non sine dubio sicut varietatem enumeravi.

Ar. Geog. Europa fere omnis, exclusa arctica. In montibus Hispaniæ et Italiæ. Spec. Africana non vidi.

G. ACUMINATUM (*Ball in Journ. Bot.* 1873, 334). (Plate XXI.)

Radix lignosa, e collo ramosissima; caules ad angulos ex setis brevibus patentibus vel subretrorsis scabri; folia sena, lineari-lanceolata, nitida, subcoriacea, nervo medio basin versus conspicuo, margine aculeata, in mucronem longum acuminata; panicula racemiformis, scil. rami laterales brevissimi trichotomi, interdum ad pedicellos 3 reducti, ex axillis foliorum superiorum 2–3 enati; corolla ochroleuca, segmentis obscure trinervibus, in vivo apiculatis; fructus (immaturus) demum granulatus.

Mar. merid.—In regione media et inferiore Atlantis Majoris. Distr. Reraya! In convalle Aït Mesan! a 1200 m. ad 2100 m. Habui a cel. Cosson spec. ab indigeno Ibrahim anno 1873 in monte Djebel Ouensa lecta!

Species ab omnibus mihi cognitis probe distincta. Spec. exsiccata *G. pulvinato*, Boiss., subsimilia sunt; sed inflorescentia et foliis longe mucronatis omnino diversa. Propius erit, ut videtur, *G. brunneum*, Munby, nisi forsan vera affinitas in sectione *Euaparine*, DC., cujus species omnes annuæ, quærenda sit. In apricis planta nostra fit contracta, foliis approximatis, caulibus 2-4-pollicaribus; in umbrosis occurrit habitu laxiore, caulibus usque pedem longis, foliis obverse lanceolatis, verticillis remotiusculis. Herba obscure virens, exsiccata nigrescit.

GALIUM CONCATENATUM (*Coss. Pl. Crit.* 38; *Walp. Ann.* iii. 901).

Mar. sept.—Tanger. Ex herb. Schousboe sub "*G. conglobatum*," spec. benevole comm. cel. Cosson!

Ar. Geog. Species hucusque nonnisi in utroque latere Freti Herculis visa.

G. BOURGÆANUM (*Coss. in Bull. Soc. Bot. Fr.*), var. MAROCCANUM (*Ball in Journ. Bot.* 1873, 335). (Plate XXII.)

Radix lignosa, elongata, inter fissuras rupium serpens, caules numerosos pendentes vel prostratos, undique hirtos, emittens; folia inferiora obtusa, sequentia elliptico- vel obovato-lanceolata, in verticillo 6–9, superiora apice mucronata, omnia hirta, vel suprema glabrescentia tenuiter ciliolata; panicula multiflora, ramosa, pyramidata; corollæ segmenta albovirentia, in sicco nigrescentia insigniter trinervia, acuminata, extus pilosa; fructus glaber.

Mar. merid.—Sat frequens in rupibus prov. meridionalium Imper. Maroccani, præsertim ad radices Atlantis Majoris. Prope Seksaoua! Milhaïn! Mtouga! Mskala!

Galium Bourgæanum, Coss., est species mihi non satis nota. Vidi tantum specimina "ex rupibus prope Tlemcen," in Bourgeau 'Pl. d'Algérie,' 1856, No. 107. Planta nostra differt corolla virescente, insigniter trinervi, nec alba subenervi.

A proximis *G. viridifloro*, Boiss., et *G. maritimo*, L., differt fructu glabro, nec hispido, cæterisque notis.

Ar. Geog. Africa boreali-occidentalis.

G. NOLI-TANGERE (*Ball in Journ. Bot.* 1873, 335).

Radix lignosa; caules herbacei, cum foliis et pedicellis fragillimi, pilis rigidiusculis basi callosis vestiti; folia cruciata, ovalia, utrinque acuta, brevissime mucronata; inflorescentia depauperata; pedicelli pauci trichotomi terminales et axillares in verticillis superioribus; corolla alba; ovarium apice emarginatum papilloso-setosum.

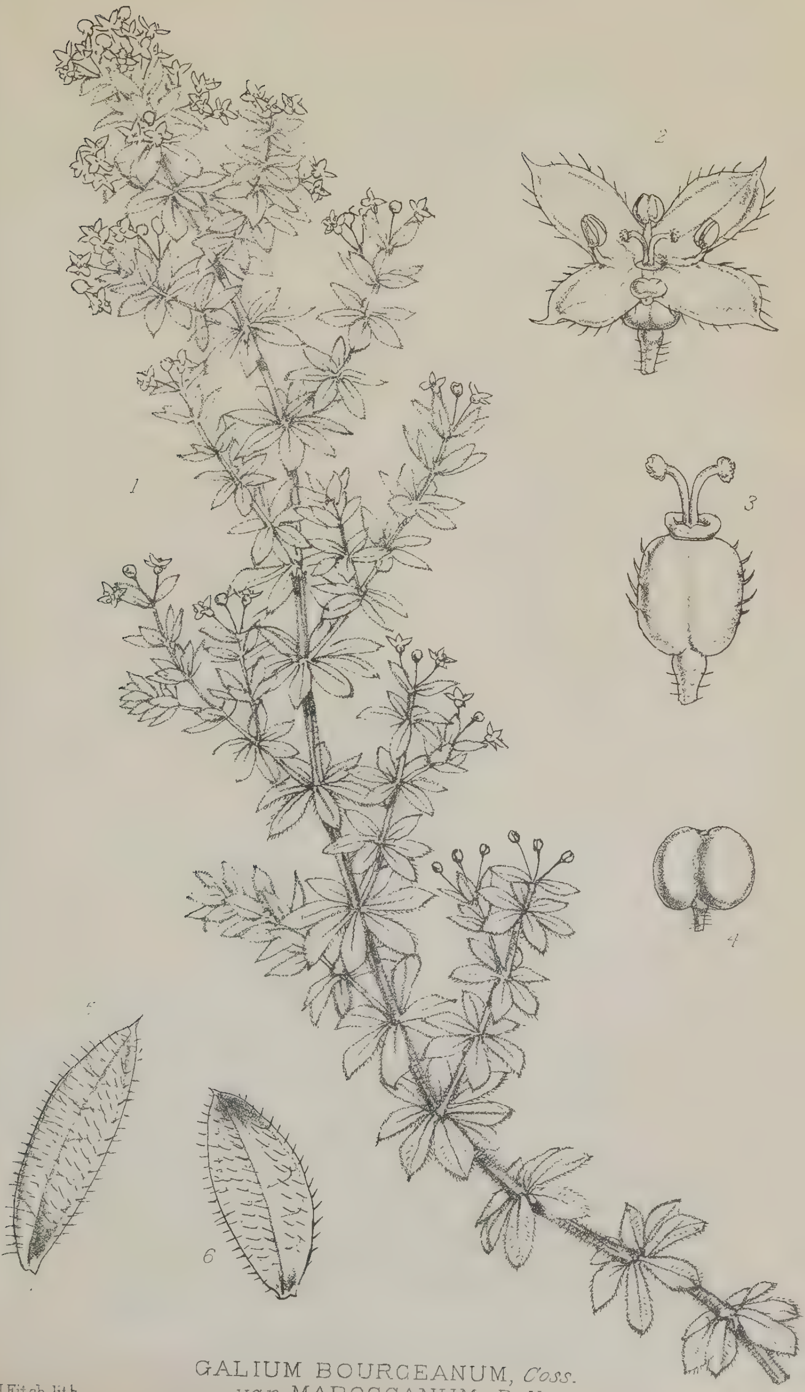
Mar. merid.—In regione media Atlantis Majoris. In convalle Amsmiz a 1500 m. ad 1600 m.!

Proximum est sed probe distinctum *G. musciforme*, Boiss. Diagn. Pl. Or.; differt a nostro imprimis corolla rubra, pedunculis bracteatis, supremis solitariis, inferioribus a 3- ad 7-floris.

G. TUNETANUM (*Lam. Dict.* ii. 583).

Mar. merid.—Distr. Mesfioua versus Ourika! In convalle Aït Mesan circ. 1400 m.!

Ar. Geog. Africa boreali-occidentalis.



GALIUM BOURGEANUM, *Coss.*
var. MAROCCANUM, *Ball*

W.H.Fitch lith

Fitch imp.

GALIUM GLOMERATUM (*Desf. Fl. Atl.* i. 128, tab 40; *DC. Pr.* iv. 606).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Spec. ex herb. Schousboe comm. Cosson!

Mar. occid.—Casa Blanca!

Ar. Geog. Hispania australis. Africa boreali-occidentalis.

—— ——, var. CAMPESTRE, *nob.*,=G. campestre (*Schousb. in Willd. Enum.* i. 152; *DC. Pr.* iv. 606).

Mar. sept.—Tanger in monte Djebel Kebir! In saxosis prope Tetuan!

Ar. Geog. Hispania australis. Africa boreali-occidentalis.

G. campestre (Duby, Bot. 248),=*G. corsicum* (Spreng. Syst. Veg. iv. pars 2, 39), est species aliena *G. rubro* proxime affinis.

Var. nostra a *G. glomerato* differt foliis inferioribus latioribus, sæpe quaternis, et corollæ lobis minus acutis; sed hæ notæ variabiles sunt, et specimina intermedia non desunt.

G. DIVARICATUM (*Lam. Dict.* ii. 580; *DC. Pr.* iv. 607).

Mar. sept.—In monte Djebel Kebir prope Tanger! Ex eodem loco spec. ex herb. Schsb. comm. Cosson!

Ar. Geog. Regio Mediterranea fere omnis. Gallia media. Adest in ins. Azoricis, sed hucusque in Macaronesia desideratur.

G. PARISIENSE (*L., Sp. Pl.* 157; *Boiss. Fl. Or.* iii. 73), var. LASIOCARPUM, *Tausch*,=G. litigiosum (*DC. Fl. Fr.* iv. 263, *et Prod.* iv. 609).

Mar. merid.—Frequens ad radices Atlantis Majoris, unde per regionem inferiorem usque ad reg. subalpinam se protendit. Mesfioua! Ourika! Reraya! Seksaoua! Aïn Tarsil! In convalle Aït Mesan a 1200 m. usque 2200 m.! In monte Djebel Tezah usque 2500 m.! In convalle Amsmiz circ. 1600 m.!

Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).

Folia in spec. ex regione montana plerumque latiora.

G. SETACEUM (*Lam. Dict.* ii. 584; *DC. Pr.* iv. 609),=G. capillare (*Cav. Icon.* tab. 191, fig. 1),=G. microcarpum (*Vahl, Symb.* ii. 30),= G. Urvillei (*Req. in DC. Pr.* iv. 607),=G. Sibthorpii (*R. et Sch. Syst.* iii. 244).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in saxosis calidioribus. Ex rupibus prope urbem Marocco! Tasseremout! Seksaoua! Mskala! Aïn Tarsil!

Ar. Geog. Regio Mediterranea fere tota (inclusa Macaronesia). Deest, ut videtur, in Lusitania et in Italia continentali.

Fructus ludit setis longiusculis patulis, vel paucis brevissimis, vel subnullis.

G. SACCHARATUM (*All. Fl. Ped.* No. 39; *DC. Pr.* iv. 607).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Prope Cap. Spartel! In monte Beni Hosmar prope Tetuan!

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Seksaoua! Tasseremout! Amsmiz!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia): in Oriente rarius occurrit. In Europa media hinc inde obvium, verisimiliter cum seminibus introductum, hodie spontaneum.

GALIUM TRICORNE (*With. Brit. Pl.* ed. 2, i. 153; *DC. Pr.* iv. 608).

Mar. merid.—In convalle Aït Mesan circ. 2100 m.! In convalle Amsmiz alt. 1500–1600 m.!

Ar. Geog. Europa media. Regio Mediterranea imprimis orientalis. In ins. Madeira rarum, hucusque in ins. Canariensibus desideratur.

G. APARINE (*L., DC. Pr.* iv. 608; *Schousb. Gew. Marok.* 45).

Mar. occid.—In prov. Haha (verisimiliter pr. Mogador) *Schsb. l. c.*

Mar. merid.—In umbrosis ad urbem Marocco!

Ar. Geog. Europa fere omnis. Sibiria. Regio omnis Mediterranea (inclusa Macaronesia). In America introductum.

G. spurium (*L., DC. Pr.* iv. 608), var. VAILLANTII (*Gren. et Godr. Fl. Fr.* ii. 44), = G. Aparine, var. β (*Lam. Dict.* ii. 581; *Schousb. Gew. Mar.* 45), = G. Aparine, var. Vaillantii (*Koch, Syn. Fl. Germ.*), = G. Vaillantii (*DC. Pr. l. c.*).

Mar. occid.—"In aggeribus umbrosis prov. Haha" (*Schsb. l. c.*) verisimiliter in vicinitate urbis Mogador.

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan a 1500 m. usque 2500 m.! In monte Djebel Tezah circ. 2200 m.!

Ar. Geog. Species habitat Europam mediam atque Asiam temperatam; in Scandinavia et in Europa australi rarius occurrit. In Oriente et in Africa boreali et in Macaronesia var. *Vaillantii* obvia est.

G. spurium, L., *G. Aparini* arcte affine et nexu genetico conjunctum, sensu nostro pro subspecie habendum est; differt tamen notis satis stabilibus, et imprimis fructu quadruplo minore. Cultum et e seminibus reproductum vix variat.

Spec. nostra Atlantica referunt formam debilem—*G. spurium*, var. γ, *tenerum* (Gren. et Godr. l. c.), cujus synonymon est (sec. cel. Boiss.) *G. aparinoides* (C. Koch, Linn. xvii. 38)—vix, ut mihi videtur, sicut varietas diversa distinguenda.

G. MURALE (*L.*, sub *Sherardia*; *All. Fl. Ped.* i. 8, tab. 77. fig. 1; *DC. Pr.* iv. 610).

Mar. sept.—Prope Cap. Spartel!

Mar. merid.—In prov. Shedma! In convalle Amsmiz circ. 1500 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

ASPERULA (*L. Gen.* 121).

A. ARISTATA (*L., DC. Pr.* iv. 583).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Ourika!

—— ——, var. SCABRA, = A. scabra (*Presl, Del. Prag.* 124; *DC. Pr.* iv. 584, *non Link*).

Mar. merid.—In convalle Amsmiz circ. 1500 m.! In rupibus supra Seksaoua!

Ar. Geog. Verisimiliter per regionem Mediterraneam occidentalem diffusa (synonyma plurima valde dubia). Deest in Macaronesia.

Asperulæ hujus gregis quam maxime ludibundæ sunt, et characteres stabiles Botanici adhuc frustra quæsierunt. Duce cel. Visiani plurimas s. d. species sicut varietates *A. cyanchicæ*, L., enumerare mallem; *A. aristata* aliæque nonnullæ forsan subspecies sistunt, sed res ardua est et studio accurato eget.

ASPERULA HIRSUTA (*Desf. Fl. Atl.* i. 127; *DC. Pr.* iv. 583), = A. repens (*Brot. Phyt. Lus.* tab. 10; *Schousb. MSS. in Herb.*), = A. algerica (*Pers. Syn.* i. 124).

Mar. sept.—Tanger (*Schsb. Herb.*)! Tetuan (1851)! (*Webb Herb.*)!

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Stirps speciosa, sat frequens ad radices Atlantis Majoris. Mesfioua! Tasseremout! Ourika! Sektana! Seksaoua! Rarius occurrit in convallibus interioribus. In convalle Aït Mesan!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

Hæc species valde ludibunda est; variat scil. superne fere glabra plus minusve scabra, corollæ læte roseæ vel pallidæ vel sordidæ tubo longiore vel breviore, caulibus simplicibus vel ramosis, capitulis terminalibus multifloris seu paucifloris.

Asperula, sp.?

In monte Beni Hosmar prope Tetuan legimus specimen immaturum nondum florens foliis omnibus longe et dense hirtis, verisimiliter ad *Asperulam* referendum, sed ab *A. hirsuta* fere certe diversum.

CRUCIANELLA (*L. Gen.* 126).

C. ANGUSTIFOLIA (*L.*, *DC. Pr.* iv. 586).

Mar. sept.—Tetuan! (*Webb Herb.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Prov. Shedma! Ourika! Seksaoua! In convalle Aït Mesan circ. 1300 m.!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). In Gallia media sat frequens.

C. MARITIMA (*L.*, *DC. Pr.* iv. 587; *Schousb. Gew. Mar.* 45).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Schsb. Herb.*), *spec. comm. Cosson*! (*Salzm. Exsicc.*)! A Cap. Spartel meridiem versus!

Mar. occid.—Saffi!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

SHERARDIA (*L. Gen.* 120).

S. ARVENSIS (*L., DC. Pr.* iv. 581 ; *Schousb. Gew. Marok.* 44).

Mar. sept.—Tanger ! Cap. Spartel ! Beni Hosmar pr. Tetuan !

Mar. merid.—In cultis non infrequens. Amsmiz ! Mesfioua ! In convalle Aït Mesan circ. 1300 m. !

Ar. Geog. Europa omnis (exclusa arctica). Regio omnis Mediterranea inclusa Macaronesia.

VALERIANEÆ (*DC. Fl. Fr.* iv. 237).

VALERIANA (*L. Gen.* 44).

V. TUBEROSA (*L., DC. Pr.* iv. 637).

Mar. sept.—In monte Beni Hosmar prope Tetuan !

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Sibiria.

In Catalogo Plantarum prope Mogador lectarum a clar. Lowe adest *Valeriana Phu.* Hæc species certe non indigena est, sed, ut fit sæpius in Europa, e cultura forsan evasit.

CENTRANTHUS (*DC. Fl. Fr.* iv. 238).

C. ANGUSTIFOLIUS (*DC. l. c., Prod.* iv. 632).

Mar. merid.—In convalle Aït Mesan a 1400 m. usque 1800 m. ! et nondum florens in jugo Tagherot circ. 2700 m. !

Ar. Geog. Species per montes Hispaniæ, Galliæ australis et Italiæ diffusa. Formæ arcte affines in Oriente.

Planta polymorpha, cujus limites ægre definiuntur. In speciminibus nostris caules e basi lignoso erecti simplices, nec adsunt rami secundarii ex axillis foliorum, ut sæpius fit in planta Europæa. Folia superiora lanceolata acuta fere æquidistantia. Characteres ex longitudine corollæ et calcaris mihi videntur fallaces.

C. CALCITRAPA (*L., et Schousb. Gew. Mar.* 11, sub *Valeriana* ; *Dufr. Val.* 39 ; *DC. Pr.* iv. 632).

Mar. sept.—Tanger ! (*Schsb. l. c.*) (*Salzm. Exsicc.*) ! Prope Cap. Spartel ! Prope Tetuan ! In monte Beni Hosmar !

Mar. occid.—Casa Blanca, *J. D. H. spec.* ! Prope Mogador (*Lowe, sp. in Herb. Kew.*) !

Mar. merid.—In convalle Aït Mesan usque 2200 m. ! In monte Djebel Tezah ad 2100 m. !

Specimen fructiferum a cl. Lowe prope Mogador lectum *C. macrosiphoni* (Boiss. Diagn. Pl. Or. ser. 1, iii. 57) simillimum est. Sed spec. nostra florentia, etsi foliis conformia, certe ad *C. Calcitrapam* genuinum referenda.

Ar. Geog. Regio Mediterranea fere omnis, imprimis occidentalis. In Oriente rarior, deest in ins. Canariensibus.

C. Calcitrapa, var. *orbiculata* (DC. Pr. *l. c.*), = *C. orbiculatus* (Dufr. *l. c.*), est tantum lusus speciei foliis suborbiculatis subintegerrimis. Huc verisimiliter referendum spec. nostrum nondum florens in monte Beni Hosmar lectum.

FEDIA (*Mœnch, Meth.* 486).

F. CORNUCOPIÆ (*L.*, sub *Valeriana*; *DC. Fl. Fr.* iv. 250, *et Prod.* iv. 630).

Mar. sept.—Prope Tetuan! Inter Tetuan et Ceuta!

—— ——, Var. corollæ tubo ter longiore,=F. graciliflora (*Fisch. et Mey. Ind. Sem. Hort. Pet.* vi. 50; *Walp. Rep.* ii. 528). Huc etiam referendæ sunt *Valeriana Cornucopiæ* (Schousb. Gew. Mar. 11) et *C. scorpioides* (Dufr. Val. 55, tab. 1; DC. Pr. iv. 630).

Mar. sept.—Frequens circa Tanger! (*Schsb. l. c.*) (*Salzm. Exsicc.*, sub "*V. cornucopiæ*")!

Ar. Geog. Species per regionem Mediterraneam calidiorem—peninsulam Ibericam australem, Italiam australem, insulas Sardiniam, Siciliam et Cretam diffusa, fit rarior in Oriente et deest in Macaronesia. Var. *graciliflora* per regionem litoralem Africæ borealis frequenter, et rarius in Hispania australi occurrit, sed forma typica non deest.

Nota diagnostica ex fructu desumpta, ut jam monuit cel. Boissier (Fl. Or. iii. 93), instabilis est et fallax, et *F. graciliflora* sine dubio ad varietatem reducenda est. *F. scorpioides*, Dufr., est tantum lusus inflorescentia ex floribus subsessilibus scorpioidea.

VALERIANELLA (*Poll. Palat.* i. 29).

V. DISCOIDEA (*Willd. Sp. Pl.* i. 184, sub *Valeriana*; *Vahl, Enum.* ii. 21, sub *Fedia*; *Loisel. Not.* 148; *Gren. et Godr. Fl. Fr.* ii. 66),=V. coronata (*DC. Pr.* iv. 628, *non Fl. Fr.* iv. 241),=Valeriana Locusta, var. coronata (*Schousb. Gew. Mar.* 12, *non L.*).

Mar. sept.—In collibus et agris regionis Tingitanæ (*Schsb. l. c.*). In collibus inter Tanger et Tetuan (*J. D. H.*)!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in regione inferiore et in convallibus Atlantis Majoris. Prov. Shedma! Mesfioua! Tasseremout! In convalle Aït Mesan 1200–1600 m.!

Ar. Geog. Regio fere omnis Mediterranea. In Macaronesia nonnisi in insula Madeira detecta.

V. AURICULA (*DC. Fl. Fr. Suppl.* 492, *et Prod.* iv. 627; *Gaud. Fl. Helv.* i. 84, sub *Fedia*).

Mar. sept.—Ex regione collina inter Tanger et Tetuan! Ex monte Beni Hosmar prope Tetuan!

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan 1500–2300 m.! In monte Djebel Tezah 1800–2000 m.!

Ar. Geog. Europa media. Hinc inde occurrit in montanis Hispaniæ, Italiæ, et Rumeliæ. In Asia Mediterranea nonnisi in Transcaucasia indicata. Ex Africa non vidi. Specimina nostra ex ditione Tingitana immatura et ideo incerta.

VALERIANELLA CARINATA (*Loisel. Not.* 149; *DC. Pr.* iv. 629).
Mar. merid.—Distr. Reraya 1000–1200 m.! In monte Djebel Tezah 1700–2000 m.!
Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia).
Fructus in spec. nostris puberulus.

V. MICROCARPA (*Loisel. Not.* 151),=V. mixta (*Vahl, Enum.* ii. 21, sub *Fedia*; *DC. Pr.* iv. 627),=V. puberula (*DC. Pr.* iv. 627).
Mar. sept.—Ex maritimis inter Tetuan et Ceuta!
Ar. Geog. Regio Mediterranea hinc inde: in peninsula Iberica et in Macaronesia nondum detecta. Forsan cum *V. Morisoni* conjungenda. Hæc per Europam fere omnem et regionem totam Mediterraneam diffusa est.

DIPSACEÆ (*Vaill. Mém. Ac. Par.* 1722).

DIPSACUS (*L. Gen.* 114).

D. SYLVESTRIS (*L., DC. Pr.* iv. 645; *Schousb. Gew. Mar.* 43).
Mar. sept.—Tanger!
Mar. occid.—In arvis "prope Saffi" (*Schsb. l. c.*).
Ar. Geog. Europa media. Regio Mediterranea omnis (inclusa Macaronesia).

SCABIOSA (*L. Gen.* 114).

S. MARITIMA (*L., DC. Pr.* iv. 657),=S. grandiflora (*Scop. Insubr.* iii. 29, tab. 14),=S. acutiflora (*Rchb. Cent.* iv. 326; *DC. Pr.* iv. 656),=S. ambigua (*Ten. Syll.* 63; *DC. Pr.* iv. 657).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)!
Mar. occid.—Mazagan! Agadir (*Coll. Indig.* 1871)! Prov. Haha pr. Mogador!
Mar. merid.—Prope Mskala!
—— ——, var. MINOR. Capitulis fructiferis minoribus, involucellis minus pubescentibus.
Mar. occid.—Aïn el Hadjar haud procul Mogador! In monte Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)!
Mar. merid.—Ad radices Atlantis Majoris sat frequens. Seksaoua! Aïn Tarsil! Mtouga!
Ar. Geog. Species satis ludibunda per regionem omnem Mediterraneam (inclusa Macaronesia) late diffusa.

S. SEMIPAPPOSA (*Salzm. in DC. Pr.* iv. 658).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan!
Mar. occid.—Casa Blanca? (nondum fructifera)!
Ar. Geog. Africa boreali-occidentalis. Hispania australis.

SCABIOSA RUTÆFOLIA (*Vahl,Symb.* ii. 26), = S. divaricata (*Lam. Illustr.* No. 1311), = S. urceolata (*Desf. Fl. Atl.* i. 122; *DC. Pr.* iv. 660).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Herb. Schousb.*), *Coss. spec.*!

Mar. occid.—Mazagan! Aïn el Hadjar haud procul Mogador!

Ar. Geog. Peninsula Iberica. Italia. Africa borealis.

Ludit foliis pinnatifidis vel bipinnatifidis inter exemplaria eodem loco enata; planta fit interdum erecta parum ramosa vel ramis divaricatis e basi patentibus. Hæ formæ tamen veras varietates non sistunt.

S. STELLATA (*L.*, *DC. Fl. Fr.* iv. 231), = S. simplex (*DC. Fl. Fr. l. c.*), = S. monspeliensis (*DC. Pr.* iv. 655).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. merid.—Frequens in regione inferiore ad radices Atlantis Majoris et in convallibus calidioribus. Mesfioua! Tasseremout! Ourika! Seksaoua! Amsmiz! In convalle Aït Mesan circ. 1600 m.!

—— ——, var. MONSPELIENSIS, = S. monspeliensis (*Jacq. Misc.* ii. 320)?

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In prov. Shedma pluries visa et lecta!

Ar. Geog. Tam species quam varietas per regionem Mediterraneam occidentalem (exclusa Macaronesia) late diffusæ sunt.

Plurimi auctores species duas in regione Mediterranea occidentali admiserunt, sed has notis diversis distinxerunt. Ex multis exemplaribus accurate scrutatis discrimina ex corollis exterioribus longioribus vel omnibus subæqualibus, et corona membranacea præ setis calycinis paullo longiore vel breviore, fallacia videntur. Varietatem *monspeliensem* admisi, dum planta sub hoc nomine cognita minus ramosa est et caulis sæpius subsimplex; gaudet foliis pinnatisectis, segmentis sæpius dentatis, et setis ad basin involucelli longioribus foveolas 8 tubi calycini obtegentibus. *S. rotata* (M. B. Fl. Taur. Cauc. iii. 102), species affinis sed probe diversa, distinguitur imprimis squamis receptaculi setaceis, nec ut in *S. stellata* dilatatis scariosis.

Scabiosam quandam nondum florentem, foliis radicalibus tantum donatam ulterius inquirendam, legi in monte Beni Hosmar prope Tetuan!

PTEROCEPHALUS (*Vaill. Act. Ac. Par.* 1722, 184).

P. DEPRESSUS (*Coss. Bull. Soc. Bot. Fr.* xx. 250).

Sequitur descriptio Cossoniana:—"Planta *perennis subacaulis*, cæspitosa, *humo adpressa*, pulvinos latos densosque efformans, molliter breviterque villosa. Caudex crassus, lignosus, tortuosus, superne in caudiculos permultos ramosos divisus. *Folia* omnia *apice caudiculorum* in rosulas *congesta*, petiolata petiolo lato, *pinnatisecta*, 4–5-juga segmentis inferioribus linearibus vel lineari-spathulatis integris, cæteris obovato-cuneatis superne lobulatis lobulo exteriore profundiore lobulis obtusis, segmento superiore sæpius tripartito. Capitula e centro rosularum foliorum enata, brevissime pedunculata. Involucrum uniseriale, foliolis circiter 12, extus molliter breviterque villosis, lanceolatis acutis, floribus subdimidio brevioribus. Receptaculum alveolatum, hirtulum. Corollæ extus sericeæ tubo violaceo, limbo inæqualiter 4fido intus lutescente, exteriores laciniis oblongis obtusis paulo radiantibus, interiores laciniis lanceolatis. Stamina 4, corollam longe excedentia. Stylus exsertus, stigmate oblongo subbilabiato. Involucellum (immaturum tantum notum) dense villosum, foveolis obsoletis pilis occultatis, cylindraceo-turbinatum, corona brevi annulæformi. *Calyx coronam involucelli vix excedens, setis* 14–18, involucello subquadruplo longioribus, dense plumosis, atro-violaceis."

Mar. merid.—Satis frequens, ut videtur, in regione media Atlantis Majoris. Primus Balansa legit in monte Sidi Fars pr. Keira. Legimus in convalle Aït Mesan usque in jugo Tagherot a 2000 m. ad 2700 m.! In convalle Amsmiz 1500–1700 m.! In monte Djebel Ouensa legit indigenus Ibrahim (*Coss. spec.*)!

Monente cel. auctore hic juxta *P. perennem*, Vaill., collocandus est, sed ab hoc et affinibus probe distinctus.

COMPOSITÆ (*Vaill. Act. Acad. Par.* 1718).

BELLIS (*L. Gen.* 962).

B. ANNUA (*L.*, *DC. Pr.* v. 304).

Mar. sept.—Tanger! (*Schousb. Herb.*). Inter Tanger et Tetuan!

Planta circa Tingidem sat frequens gaudet ligulis pulchre cærulescentibus fere ut in specie Atlantica mox enumeranda. Cæteris notis nullis a typo differt.

—— ——, var. β, MINUTA (*DC. Pr. l. c.*),=B. microcephala (*Lange, Pug.* 116), *ex Boiss. Fl. Or.* iii. 175.

Mar. merid.—In Atlantis Majoris convalle Amsmiz, alt. 1600 m.!

Spec. nostris omnino conformia legit Balansa (Pl. d'Algérie, 1852, No. 620). Hæc statura minima, ligulis brevissimis involucrum parum excedentibus, foliis oblongo-spathulatis integerrimis a typo recedunt.

Ar. Geog. Per regionem Mediterraneam (inclusa Madeira) late diffusa, fugit regiones continentales a mari remotas. Varietas in Algeria, Hispania et (?) in agro Byzantino detecta est.

B. SYLVESTRIS (*Cyr. Plant. Rar.* ii. 12, tab. 4; *DC. Pr.* v. 305), var. PAPPULOSA,=B. pappulosa (*Boiss. Voy. Esp.* 303, tab. 91).

Mar. sept.—Prope Tanger (*Webb Herb.*)! In monte Djebel Kebir! et juxta Cap. Spartel! Inter Tanger et Tetuan!

Primo aspectu differt insigniter acheniis pappo setoso coronatis; sed hæc nota, etsi gravis, certe variabilis est. Inter specimina nostra Tingitana adsunt nonnulla quæ statura majore, foliis latioribus nervis tribus prominentibus insignitis, pappo breviore paucisetoso, ad *B. rotundifoliam* (B. et R. Pug. 55) proxime accedunt. Hujus specimina typica ex ditione nostra non vidi, sed vereor ne *Bellis rotundifolia* et affinis *B. atlantica* (B. et R. *l. c.*) inter varietates *B. sylvestris* reducendæ sint.

Ar. Geog. *B. sylvestris* per regionem Mediterraneam litoralem et sublitoralem late diffusa est; deest tamen in Macaronesia. Var. *pappulosa* nonnisi in Hispania australi et Africa boreali-occidentali finitima hucusque obvia fuit.

BELLIS CÆRULESCENS (*Coss. MSS.*).

Radix perennis (sæpius bi- vel triennis?) fibrillas longas filiformes emittens; folia omnia basilaria cochleariformia, limbo ovato-orbiculari interdum basi subcordato petiolo elongato suffulto, ex pube brevi subincana; scapi florigeri aphylli elongati tenues, capitula magnitudine fere *B. perennis* vel minora gerentia; ligulæ pulchre cærulescentes involucrum breviter pilosum duplo superantes; achenia compressa undique pilis patentibus brevissimis obsita, prorsus epapposa.

Planta delicatula loca umbrosa prædiligens a *B. rotundifolia* aspectu valde diversa. In hac achenia facie glabrescentia, margine setosa, apice pappo brevi semper coronata.

Mar. merid.—In regione media Atlantis Majoris sat frequens. In monte Djebel Sidi Fars ad 2000 m. primus detexit cl. Balansa. Legimus in convalle Aït Mesan a 1800 m. usque 2400 m.! In monte Djebel Tezah 1800–2300 m.!

ERIGERON (*L. Gen.* 951).

E. LINIFOLIUM (*Willd. Sp. Pl.* iii. 1965; *Boiss. Fl. Or.* iii. 169), = E. crispum (*Pourr. Chlor. Narb.* 470), = Conyza ambigua (*DC. Fl. Fr. Suppl.* 468, *et Prod.* v. 381).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. occid.—Mazagan! Mogador (*Lowe Cat.*).

Mar. merid.—Ad radices Atlantis Majoris prope Amsmiz!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Oriente nonnisi in terris continentalibus obvium.

NOLLETIA (*Cass. Dict.* xxxvii. 479).

N. CHRYSOCOMOIDES (*Desf. Fl. Atl.* ii. 269, sub *Conyza*; *Cass. loc. cit.*; *DC. Pr.* v. 366).

Mar. occid.—Mogador, præsertim in arenosis secus rivulum Oued Kseb! (*Brouss. ex Coss.*; *Lowe Cat.*, *Balansa spec.*)! Agadir (*Coll. Indig.* 1871)!

Mar. merid—In glareosis ad radices Atlantis Majoris. Mesfioua! Ourika!

Ar. Geog. Africa boreali-occidentalis, usque ad fines Saharenses ditionis Constantinæ.

EVAX (*Gærtn. Fruct.* ii. 393).

E. PYGMÆA (*L.*, sub *Filagine*; *Pers. Syn.* ii. 422; *DC. Pr.* v. 458).

Mar. sept.—Tanger versus Cap. Spartel!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Sec. cel. A. P. De Candolle exstat in herb. Broussonnet specimen *E. exiguæ* (Sibth., sub *Filagine*) forsan ex Mauritania allatum. Tam hæc quam *E. asterisciflora* in ditione nostra quærendæ sunt.

Evax Heldreichii (*Parl. Giorn. Tosc.* No. 2, *Pl. Nov.* p. 15), = Filago atlantica (*Ball, Journ. Bot.* 1873, 364).

Mar. merid.—In regione media Atlantis Majoris supra Arround in glareosis a 2200 m. ad 2400 m.!

Aspectu a planta Sicula omnino diversa, specimina nostra nulla nota gravi discrepant. Specimina quæ vidi ex Sicilia, ut jam monuit cel. Parlatore, ad glomerulum nanum nucis avellanæ magnitudine reducta. Planta Atlantica e collo radicis ramos plurimos prostratos serpentes 4–6-pollicares emittit. Involucri pentagoni foliola nitida flavescentia dorso viridia. Achenium sulcatum prismaticum subfusiforme.

Ar. Geog. Hucusque in Sicilia et Algeria orientali tantum detecta.

Micropus (*L. Gen.* 996).

M. supinus (*L., DC. Pr.* v. 460).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Inter Tanger et Tetuan!

Mar. merid.—Ad radices Atlantis Majoris. Ourika! Reraya!

Ar. Geog. Peninsula Iberica. Africa borealis. Asia Mediterranea.

M. bombycinus (*Lag. Gen. et Sp.* 32; *DC. Pr.* v. 460).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. merid.—In regione inferiore Atlantis Majoris. Aït Mesan circ. 1500 m.! In convalle Amsmiz usque 1600 m.! Seksaoua! et alibi visus!

Ar. Geog. Per regionem Mediterraneam late diffusus ultra Pyrenæos in Galliam anstralem se protendit. Deest in Macaronesia.

Filago (*L. Fl. Suec.* 302).

F. germanica (*L., DC. Pr.* vi. 247).

Mar. sept.—Prope Tanger!

Mar. merid.—Misra ben Kara, haud procul urbe Marocco! Prov. Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Specimina nostra ad formam *F. canescentem*, Jord., referenda.

—— ——, var. γ, lanuginosa (*DC. l. c.*), = F. lanuginosa, *Req.*, = F. eriocephala (*Guss. Pl. Rar.* 344, tab. 69).

Mar. sept.—Tanger in monte Djebel Kebir!

Mar. merid.—In convalle Amsmz circ. 1500 m.!

Ar. Geog. Species per Europam mediam et regionem Mediterraneam (inclusa Macaronesia) late diffusa. Var. *lanuginosa* in calidioribus magis frequens.

F. spathulata (*Presl, Del. Prag.* 93; *Boiss. Fl. Or.* iii. 246), = F. germanica, var. δ (*DC. Pr.* vi. 247).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (1851)!
Mar. occid.—Casa Blanca! Mogador (*Brouss.*)? Confer *DC. l. c.*
Mar. merid.—Prov. Shedma! Prope Mskala!
Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).
Hanc formam *F. germanicæ* proximam haud sine dubio pro subspecie enumeravi.

Filago heterantha (*Rafin. Giorn.* ii. fasc. xii. 170; *Guss. Fl. Sic.* ii. 864), = F. Cupaniana (*Parl. Spec. Nov.* 13).
Mar. merid.—In convalle Aït Mesan usque 2100 m.! In monte Djebel Tezah! Specimen incompletum et incertum in convalle Ourika!
Ar. Geog. Sicilia. Algeria. Marocco meridionalis.
Habui pro *F. Duriæi* (Coss. Pl. Crit. 58) sed amicissimus Cosson certum me fecit de hac specie mihi prius non satis cognita.

F. gallica (*L., DC. Pr.* vi. 248).
Mar. sept.—Tanger! Cap. Spartel! Inter Tetuan et Ceuta!
Mar. occid.—Casa Blanca!
Mar. merid.—Frequens in regione inferiore Atlantis Majoris usque 2000 m. Mesfioua! Inter Tasseremout et Ourika (*G. Maw sp.*!) et alibi pluries visa!
Ar. Geog. Europa media. Regio omnis Mediterranea. Fertur in America australi; an indigena?

Ifloga (*Cass. Dict.* xxxvii. 13).

I. spicata (*Forsk. Fl. Æg.-arab.* p. 73, sub *Chrysocoma*; *Vahl, Symb.* i. 70, sub *Gnaphalio*; *Sch. Bip. in Webb Phyt. Can.*), = I. Fontanesii (*Cass. l. c.*), = Gnaphalium cauliflorum (*Desf. Fl. Atl.* ii. 267), = Trichogyne cauliflora (*DC. Pr.* vi. 266), = Gnaphalium ægyptiacum (*Pers. Syn.* ii. 421), = G. supracanum (*Sibth. et Sm. Fl. Gr.* ix. p. 47, tab. 861).
Mar. occid.—Fertur in agro Mogadorensi ex spec. Broussonnetiano, sed a cæteris botanicis non visa et ideo incerta. Prope Agadir legerunt coll. indigeni Majo 1871!
Mar. merid.—Nascitur prope Misra Ben Kara! in planitie circa urbem Marocco, et inde versus radices Atlantis Majoris. Mesfioua! et alibi visa!
Ar. Geog. Per regionem Mediterraneam calidiorem et regiones subtropicales orbis veteris, ex India orientali usque insulas Canarienses, et in Africa australi late diffusa. Deest hæc species in Europa nisi in Hispania australi, ubi rarissima.
Gnaphalium Ruppellii (Fres. Mus. Senck. 79), quod idem est ac *G. Ammophila* (Wall. Cat. 2943), fertur in DC. Prod. *l. c.* inter synonyma hujus speciei polyonymæ. Sistit re vera varietatem vel subspeciem foliis subtus araneoso-lanatis. In planta Africana folia in pagina superiore araneoso-lanata, subtus nitida sunt.

PHAGNALON (*Cass. Bull. Phil.* 1819, p. 174).

P. SAXATILE (*L.*, sub *Conyza*; *Cass. l. c.*; *DC. Pr.* v. 396).

Mar. sept.—Tanger (*Schsb. Herb.*)! Cap. Spartel! Inter Tanger et Tetuan! Prope Tetuan!

Mar. occid.—Casa Blanca!

Mar. merid.—Frequens per provincias meridionales Imperii et in regione inferiore Atlantis Majoris usque 2000 m. Legimus ad Tasseremout! Milhaïn! In convalle Aït Mesan! In monte Djebel Tezah!

—— ——, var. INTERMEDIUM (*DC. Prod. l. c.*), = Conyza intermedia (*Lag. Elench.* 28), = Phagnalon Lagascæ (*Cass. loc. cit.*).

Mar. merid.—Valde frequens in regione calidiore prov. Haha! Shedma pluribus locis! Seksaoua! In rupibus haud procul urbe Marocco, *G. Maw*!

Ar. Geog. Species late diffusa per regionem Mediterraneam occidentalem (inclusa Macaronesia); nec ut mihi videtur satis diversa est species orientalis *P. græcum*, Boiss.

Optimo jure varietas nostra *P. intermedium* vocatur, dum inter formas vulgatiores *P. saxatilis* et *P. rupestris*, DC., transitum præbet. Ut morem gererem magistris rei botanices *P. rupestre* sicut subspeciem enumeravi. Horum, re vera, formæ extremæ toto cœlo diversæ videntur; sed, si seriem formarum intermediarum diligenter explorabis, vix invenies notam stabilem differentialem.

P. rupestre (*L. Mant.*, sub *Conyza*; *DC. Pr.* v. 396).

Mar. sept.—Tanger (*Schsb. Herb.*)! Cap. Spartel! Tetuan! (1851)!

Mar. occid.—Mogador (*Lowe Herb.*)!

Mar. merid.—Ad radices Atlantis Majoris pr. Seksaoua!

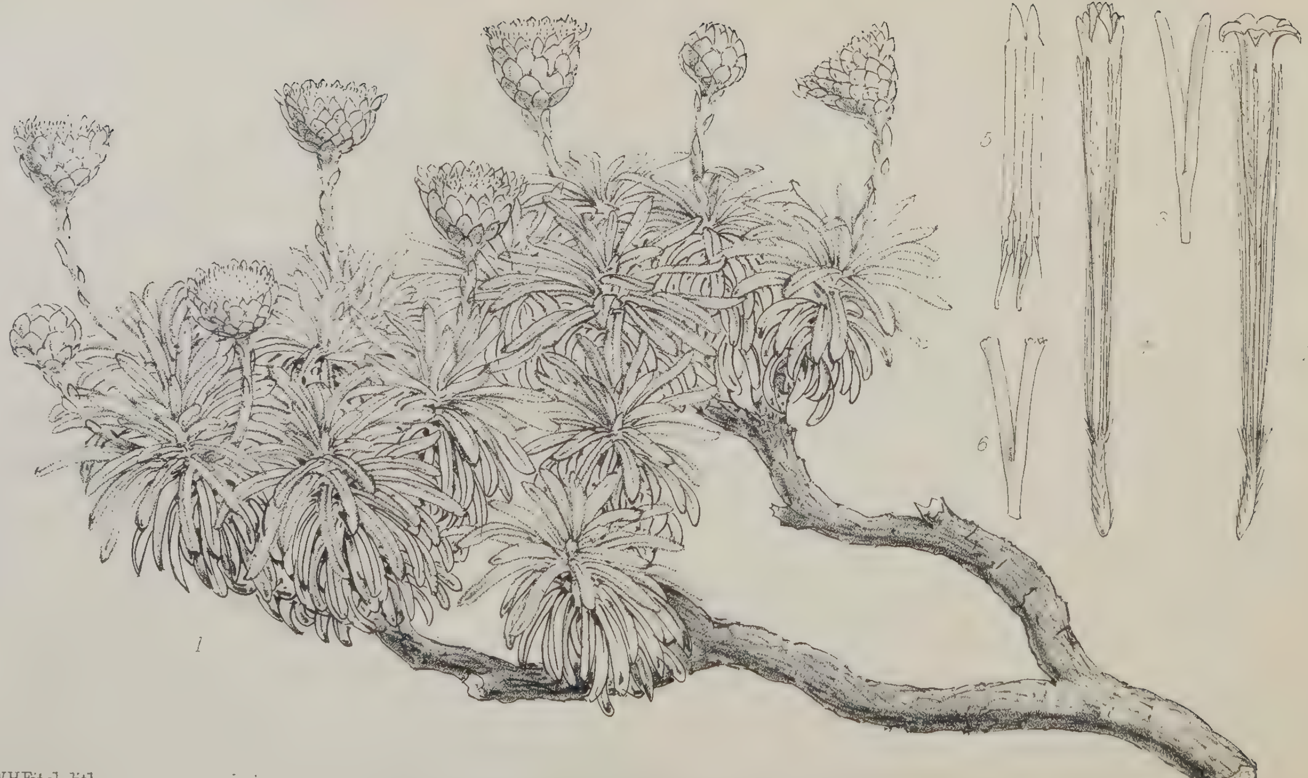
—— ——, var. CALYCINUM, *nob.*, = P. calycinum (*Cav.*, sub *Conyza*; *DC. Pr.* v. 397), = P. Bennettii, *Lowe, MSS.*

Mar. occid.—Legimus prope Aïn el Hadjar! et in monte Djebel Hadid! et ibidem legerunt anno 1873 cll. Rein et Fritsch. Primus hanc formam legit beatus Broussonnet. Specimina inter hanc et typum *P. rupestris* ludentia legit in agro Mogadorensi G. Maw!

Ar. Geog. P. rupestre per regionem omnem Mediterraneam (inclusa Macaronesia) diffusum est. Var. *calycinum* in Madeira et in agro Mogadorensi obvia.

P. ATLANTICUM (*Ball, in Journ. Bot.* 1873, 364).

Suffruticosum, radice crassa lignosa, ramis numerosis, abbreviatis, adscendentibus, usque ad apicem foliaciis; folia oblonga, obtusa, superne cinereo-viridia, subtus albo-tomentoso; capitula terminalia, ex foliis supremis parum exserta; involucri foliola eximie bicoloria, nempe pallide flava, macula curvata purpurea notata, exteriora acuta laxe imbricata basi fimbriata, media margine scarioso-dilatata, intima acuta cæteris longiora; achenia ex pilis copiosis vitreo-lucentia.



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Fitch imp

GNAPHALIUM HELICHRYSOIDES, *Ball.*

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan circ. 1600 m.!

P. purpurascens, Sch. Bip. in Webb Phyt. Can., habitu ad speciem nostram aliquid accedens, est *P. saxatili* propius, pedunculis elongatis filiformibus, terminalibus et axillaribus, involucri foliolis acutioribus.

GNAPHALIUM (*Don, Trans. Wern. Soc.* vi. 563).

G. LUTEO-ALBUM (*L., DC. Pr.* vi. 230).

Mar. merid.—Videtur haud infrequens, ex regione inferiore in zonam mediam Atlantis Majoris ascendens. Legimus pr. Ourika! et Aït Mesan usque 2000 m.! Specimina ex Oasi Akka benevole comm. cel. Cosson.

Ar. Geog. Per Europam mediam et regionem Mediterraneam omnem late diffusum, inde per regiones temperatas et calidiores totius orbis aufuga vel indigenum.

G. HELICHRYSOIDES (*Ball, in Journ. Bot.* 1873, 364). (Plate XXIII.)

Perenne, cæspitosum, ex rhizomate crasso lignoso ramos plurimos brevissimos edens; folia lineari-oblonga, margine revoluta, subtus araneoso-lanata, in pagina superiore sparsim lanata, demum glabrescentia viridia; scapi florigeri subbipollicares, erecti, herbacei, dense araneoso-lanati, squamis fuscis ebracteolati; capitula solitaria, pro genere magna; involucri multiseriati foliola fusco-scariosa, oblonga, apice rotundata, exteriora latiuscula, interiora linearia subacuta; flosculi omnes tubulosi æquilongi, fœminei in seriebus 3–6 exterioribus, hermaphroditi numero variabiles interdum fœmineis subæquales, sæpius pauciores; antheræ longe caudatæ; receptaculum vix convexum, alveolorum margine demum læve.

Mar. merid.—In regione alpina Atlantis Majoris. In jugo Tagherot circ. 3000 m.!

Nuper mihi comm. cel. Cosson exemplaria in monte Afougueur ab indigeno Ibrahim lecta, quæ formam seu varietatem sp. nostræ referunt foliis angustioribus arcte revolutis, in pagina superiore glaberrimis.

Planta anomala, quoad genus ægre definienda. Celebb. Bentham et Hooker in Gen. Plant. vol. ii. pp. 305–309 discrimen inter *Gnaphalium* et *Helichrysum* in ratione flosculorum ♀ et ☿ posuerunt, prioribus scilicet in *Gnaphalio* prævalentibus, in *Helichryso* deficientibus. Achenia in nostra pseudobicoronata, ex pilis versus apicem achenii elongatis pappum exteriorem simulantibus. Hæc structura se ostendit in *Lucilia* (*Gnaphalii* grege Austro-americano) et interdum in *Gnaphalio* (*Omalotheca*, Cass.) *supino*, L. Affinitas proxima cum nostra stirpe inter *Gnaphalia* Andensia (§ *Merope*, Wedd.) quærenda.

Capitula facie ac structura *Phagnalon* quodammodo referunt; sed invita natura cum hoc genere hucusque naturali plantam nostram jungeres.

Scapi herbacei squamigeri rationem vitalem longe diversam indicant.

HELICHRYSUM (*DC. Prod.* vi. 169).

H. STŒCHAS (*L.*, sub *Gnaphalio*; *DC. Pr.* vi. 182).
Mar. occid.—Agadir (*Coll. Indig.* 1871)!
Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).
Species plurimæ affines per omnem regionem dispersæ.

LEYSSERA (*L. Sp. Pl.* 1249).

L. CAPILLIFOLIA (*Willd. Mag. Naturf. Berl.* 1811, 160; *DC. Pr.* vi. 279), = Gnaphalium leysseroides, *Dsf.*
Mar. merid.—Ad radices Atlantis Majoris. Mesfioua! Ourika!
Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia). In Europa nonnisi in Hispania austro-orientali detecta.

INULA (*L. Gen.* 956).

I. MONTANA (*L.*, *DC. Pr.* v. 468).
Mar. merid.—In Atlante Majore loc. dict. Tamarut specimen legerunt cl. Rein et Fritsch! Specimen ab indigeno Ibrahim lectum benevole comm. cel. Cosson!
Ar. Geog. Montes Hispaniæ, Galliæ australis, Dalmatiæ et Italiæ. Loca calidiora Alpium Europæ. Specimina Algeriensia non vidi.

I. CRITHMOIDES (*L.*, *DC. Pr.* v. 470).
Mar. sept.—Tanger (*Webb Herb.*)! (*Schsb. Herb.*)!
Ar. Geog. Ad litora Mediterranea, et Europæ occidentalis. Deest in Macaronesia.

I. VISCOSA (*L.*, sub *Erigeron*; *Ait. H. Kew.* iii. 223).
Mar. occid.—Mogador (*Lowe Cat.*), a nobis etiam visa!
Mar. merid.—Legi mox floribundam prope Ourika! Specimina nondum florentia pluries vidi in regione inferiore!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

PULICARIA (*Gærtn. Fruct.* ii. 461).

P. ARABICA (*Cass. Dict.* xliv. 94; *DC. Pr.* v. 478; *an L.* sub *Inula*?).
Mar. sept.—Tanger (*Schsb. Herb.*). Ad lacus salsos prope Tanger (*Webb sp.*)!
Mar. occid.—Casa Blanca! Mazagan! Prope Mogador!
Mar. merid.—In planitie haud procul urbe Marocco! Ex Aït Ibrahim spec. attulit indigenus Mardochæus et benev. comm. cel. Cosson!
Ar. Geog. Africa borealis. Asia Mediterranea. Peninsula Iberica.
Species valde ludibunda. Cel. Boissier (Fl. Or. iii. 205) nuper plantam Hispanicam a typo diversam judicavit et pro specie diversa (*P. hispa-*

nica) proposuit. Pace tanti viri notæ differentiales citati nimis inconstantes mihi videntur.

Pulicaria longifolia (*Boiss. Diagn. Pl. Or.* ser. 2, iii. 16; *Ball in Journ. Bot.* 1873, 364).

Differt a *P. arabica* radice bienni vel interdum perennante, cauli elato 1–3-pedali stricto, ramis paucis suberectis, foliis longioribus, basi semiamplexicaulibus, vix aut ne vix auriculatis. Hanc stirpem pro subspecie *P. arabicæ* anno 1873 proposui, sub eodem nomine triviali quo cel. Boissier stirpem suam orientalem jamdudum distinxit. Specimina Ægyptiaca a nobis nuper diligenter explorata notas nullas differentiales præbuerunt. Habitu a *P. arabica* longe recedit et facie *P. capensi* simillima est *P. longifolia*; sed involucra et achenia omnino *P. arabicæ*, et mihi videtur hujus sp. proles, facta biennis vel interdum perennans. Specimina a Balansa ad Oued Biskra lecta (Plantes d'Algérie, No. 774) sistunt formam intermediam.

Mar. merid.—Sat frequens in udis et secus aqueducta regionis inferioris. Legi prope urbem Marocco! In distr. Mesfioua! Prope Ourika! Prope Mzouda!

Ar. Geog. Africa borealis ex Ægypto usque Imp. Maroccanum. Peninsula Sinaïtica. Verisimiliter etiam in Africa tropica.

Inter plantas itineris Speke et Grant video *Pulicariam* cui scheda "*P. Grantii*, MSS.," secus Nilum lat. 16° N. lectam, quæ mihi vix a *P. longifolia* diversa videtur. Specimen alterum adest in herb. Kewensi a cel. Schweinfurth in Magna Oasi Lybica lectum cui scheda "*P. inuloides*, DC." Hæc a *P. longifolia* non differt nisi pedunculis crassioribus rigidioribus, et foliis subundulatis. Quid sit *P. inuloides* (DC. Pr. v. 480), ex specimine a b. Broussonnet "prope Mogador" lecto descripta, hucusque eruere non potui. Suspicor tamen hanc esse ipsissimæ *P. longifoliæ* lusum floribus radii irregulariter tubulosis, nec ligulatis.

P. ODORA (*L.*, sub *Inula*; *Rchb. Fl. Exc.* ii. 1232; *DC. Pr.* v. 479).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *P. dumetorum*)! (*Webb Herb.*)! Djebel Kebir! Pr. Cap. Spartel!

Mar. merid.—Ourika! Inter Tasseremout et Ourika (*Maw spec.*)!

—— ——, var. MACROCEPHALA, *nob.* Differt ligulis longioribus et capitulis fere duplo majoribus.

Mar. occid.—Ex monte Djebel Hadid haud procul Mogador attulerunt cll. Rein et Fritsch (*spec. in Herb. Kew.*)!

Ar. Geog. Species per regionem Mediterraneam præsertim occidentalem (exclusa Macaronesia) late diffusa. In Asia Mediterranea videtur rara.

P. MAURITANICA, *Coss. in Balansa Pl. Maroc.* 1867.

Species ab auctore nondum descripta, a cæteris hujus regionis omnino distincta. Nuper a cl. Warion in Algeria detecta.

Mar. merid.—Haud rara, ut videtur, in rupibus soli expositis prov. meridionalium. Legimus prope Seksaoua! et in convalle Aït Mesan ad 1200 m.! In collibus pone urbem Marocco septentrionem versus (*G. Maw spec.*)! Ex provincia Shedma spec. attulerunt Rein et Fritsch! In rupibus prope Keira jam legit anno 1867 cl. Balansa ex spec. in herb. nost.! Exstat spec. in herb. Schousboe sec. schedam MS. "prope Mogador" lectum. Verisimiliter a viro sedulo in itinere versus urbem Marocco detectum, nec in regione litorali, ubi nemini recentiorum obvium fuit.

Ar Geog. Africæ boreali-occidentalis regio continentalis.

PULICARIA SICULA (*L.*, sub *Erigeron*; *Moris, Fl. Sard.* ii. 363),=Jasonia sicula (*DC. Ann. Sc. Nat., et Prod.* v. 476),=Inula chrysocomoides (*Poir. Voy.* ii. 239; *Schousb. Herb., non Dsf. Fl. Atl.* ii. 275).

Mar. sept.—Tanger (*Schsb. Herb., comm. Cosson*)! (*Salzm. Exsicc.*)!

Ar. Geog. Europa Mediterranea. In Africa boreali infrequens. Deest in Macaronesia.

ODONTOSPERMUM (*Neck. Elem.* i. 20).

De hujus generis synonymia conf. Sch. Bip. in Phyt. Canar. ii. 232.

O. AQUATICUM (*L.*, sub *Buphthalmo*; *Neck. l. c.*; *Sch. Bip. l. c.*),=Asteriscus aquaticus (*Mœnch, Meth.* 592; *DC. Pr.* v. 486,=Nauplius aquaticus (*Cass. Dict.* xxxiv. 273).

Mar. sept.—Tanger! Inter Tanger et Tetuan! Tetuan (1851)!

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In regione inferiore Atlantis Majoris. Reraya! Tasseremout! In convalle Aït Mesan usque 1500 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

O. MARITIMUM (*L.*, sub *Buphthalmo*; *DC. Pr.* v. 486, sub *Asterisco*; *Sch. Bip. in Phyt. Canar.* ii. 233).

Mar. sept.—Prope Tetuan! Inter Tetuan et Tanger! In insulis Zafirinis (*Webb spec.*)!

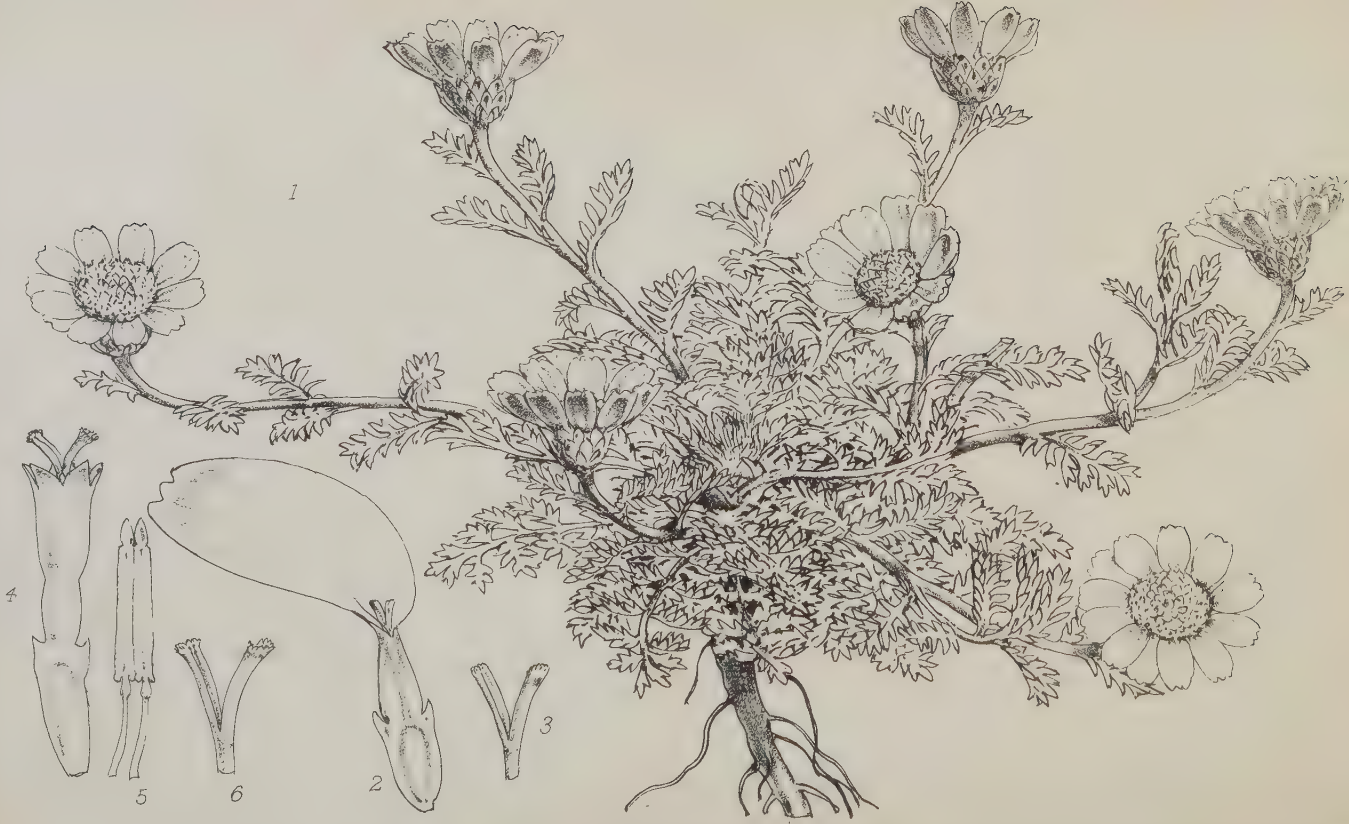
—— ——, var. MICROPHYLLA? Plantam singularem nondum florentem foliis crebris minimis ulterius inquirendam legi semel Apr. 1871.

Mar. sept.—In declivibus maritimis prope Ceuta!

Ar. Geog. Species per zonam litoralem Europæ australis et Africæ borealis diffusa. In ins. Canariensibus olim reperta (sec. Buch) sed a recentioribus non visa?

O. ODORUM (*Schousb. Marok*, 185, tab. 7, sub *Buphthalmo*; *DC. Pr.* v. 486, sub *Asterisco*; *Sch. Bip. in Phyt. Canar.* 236).

Mar. occid.—Sat frequens in regione litorali prope Mogador. Legimus pr. rivulum Oued Kseb! in via qua itur ad Castellum Shedma (*Maw spec.*)! et copiose prope Aïn el Hadjar! Habeo specimen a Balansa in sylva Arganiæ lectum anno 1867! Demum legi in maritimis ab urbe Saffi meridiem versus!



ANACYCLUS DEPRESSUS *Ball.*

Fitch imp.

Ar. Geog. Species Maroccana in Canaria a Bourgeau (itinere secundo) detecta; in ins. Porto Santo erronee a beato Webb indicata. Confer Lowe, Man. Fl. Mad. i. 485.

Species nostra ab *O. graveolente* (Forsk. sub *Buphthalmo*) differt indumento adpresse sericeo-velutino nec cinereo-hirtulo, foliis basi minus dilatatis vix cordatis, foliolis involucri et paleis receptaculi minus acutis. Species Forskohleana tamen per totam regionem desertorum diffusa, et nuper ab indigeno Mardochæo in Oasi Akka detecta, nonnihil variat, et *O. odorum* mihi videtur hujus proles litoralis et sicut subspecies enumerandum. Planta Canariensis sistit var. *angustifolium.*

ODONTOSPERMUM IMBRICATUM (*Cav. Anal. Cienc. Nat.* 1801, iv. 94, sub *Buphthalmo*; *DC. Pr.* v. 487, sub *Asterisco*),=Buphthalmum elegans (*Willd. Mag. Naturf. Berl.* 1807, 198),=Buphthalmum chrysanthemoides (*Poir. Dict. Suppl.* i. 747).

Mar. occid.—Occurrit rarissime in insula Mogador, specimen unicum detexi capitulo unico mox floribundo præditum!

Ar. Geog. Species Maroccana propria.

Quoad genus hæc mihi videtur dubia species, donec fructus (a Candolleo, ut videtur, non visus) characteres certiores suppeditet. Involucri foliola exteriora foliacea apice subspathulata dentata, interiora acuta, nervo medio prominulo mucronata.

PALLENIS (*Cass. Dict.* xxxvii. 275).

P. SPINOSA (*L.*, sub *Buphthalmo*; *DC. Pr.* v. 487).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*, sub "*Buphthalmum aureum*")! Inter Tanger et Tetuan (*J. D. H. spec.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Prov. Shedma pluribus locis! Prope urbem Marocco (*Maw spec.*)! Mesfioua!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Stirps satis ludibunda; variat caule graciliore, habitu tenuiore, sed vix in varietates divellenda.

XANTHIUM (*L. Gen.* 1054).

X. STRUMARIUM (*L.*, *DC. Pr.* v. 522), var. ANTIQUORUM (*Wallr. Beytr.* 229).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *X. sphærocephalo*)!

Ar. Geog. Species verisimiliter Europæ australis vel Asiæ Mediterraneæ indigena; inde per regiones temperatas calidiores totius orbis diffusa; in Africa verisimiliter introducta.

ANACYCLUS (*Pers. Syn.* ii. 464).

A, DEPRESSUS (*Ball in Journ. Bot.* 1873, 365). (Plate XXIV.)

Radix biennis vel perennis fusiformis verticalis, ramos plurimos prostratos e collo emittens; rami apicem versus furcati, plerumque dicephali, usque sub capitulo foliosi non incrassati; folia pinnata, pinnis alternis in lacinias lineares dissectis; involucri hemisphærici foliola herbacea, acutiuscula, rigida, margine non scariosa, regulariter imbricata; flosculi fœminei ligulati; ligulæ paucæ breves erectæ, atrorubentes interdum albo marginatæ; receptaculi paleæ induratæ, longiores quam in affini *A. Pyrethro*, apice tantum herbaceæ, pilosæ; corollæ disci æqualiter quinquelobatæ; achenia exteriora anguste marginata in dentes triangulares expansa, interiora non marginata, omnia cum tubo corollino compressa.

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan! et in jugo Tagherot! a 2200 m. ad 2800 m.

Affinitas proxima cum *A. Pyrethro* (L., DC. Pr. vi. 15). Hic differt imprimis capitulis et ligulis duplo majoribus, ramis monocephalis, paleis receptaculi dimidio brevioribus minus induratis, acheniis omnibus alatis. Facie proximus est *A. maroccano* nostro; hic autem facile distinguitur disci corollis biaristatis, pedunculis apice incrassatis et acheniis anguste vel subexalatis.

ANACYCLUS CLAVATUS (*Desf. Fl. Atl.* ii. 287, sub *Anthemide*; *Pers. Syn.* ii. 465; *DC. Pr.* vi. 16),=Anacyclus tomentosus (*DC. Fl. Fr.* v. 481, *et Prod. l. c.*),=Anthemis biaristata (*DC. Fl. Fr.* iv. 204).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Inter Tetuan et Ceuta!

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia).

A. Maroccanus (*Ball in Journ. Bot.* 1873, 365).

Pumilus, prostratus; flosculorum exteriorum ligulæ breves, utrinque purpureæ, interdum albo-marginatæ, demum reflexæ; paleæ receptaculi apice setosæ. Involucrum et achenia fere ut in *A. clavata*.

Mar. merid.—In calidioribus Imperii Maroccani meridionalis. Prov. Shedma! ubi frequens, Mskala! Mesfioua! Misra ben Kara! et prope Agadir (*Coll. Indig.* 1871)!

Facie ab *A. claoato* satis diversus. Forsan pro specie omnino diversa vindicandus.

A. RADIATUS (*Lois. Fl. Gall.* 583; *DC. Pr.* vi. 16),=Anthemis valentina, var. α (*L. Sp. Pl.* 1262).

Mar. sept.—Tanger! (*Webb Herb.*, sub "*A. Pyrethrum?*")! Tetuan prope ostium fluminis (1851)!

Mar. occid.—Casa Blanca! Mazagan! Saffi! In insula Mogador!

Mar. merid.—Prov. Shedma pr. Aïn Oumast! et alibi! Misra Ben Kara!

—— ——, var. OCHROLEUCUS, *nob.* Ligulis pallide ochroleucis vel fere albis, foliis longioribus magis dissectis, et acheniis marginalibus angustius alatis. Facie *A. clavato* similior, sed hic differt involucri phyllis apice ex appendiculatis et acheniis angustis alatis, internis subexalatis.

Mar. occid.—In arenosis maritimis prope Mogador! *Lowe* (spec. in Herb. Kew., sub "*A. clavatus*, var. β")!

Hæc est forma quodammodo media inter *A. radiatum* et *A. clavatum*, priori tamen structura multo propior. Est verisimiliter (ex spec. supra citato) *A. clavatus*, var. β, Lowe in Proc. Linn. Soc. vol. v. p. 40.

Ar. Geog. Species per regionem Mediterraneam, præsertim occidentalem, late diffusa, fit rara in Græcia et Syria; in Macaronesia nondum detecta.

ANACYCLUS VALENTINUS (*L., ex parte*, sub *Anthemide*; *DC. Pr.* vi. 16).

Mar. merid.—Satis frequens præsertim ad radices Atlantis Majoris. Legimus in prov. Shedma! prope Sheshaoua! prope urbem Marocco! pr. Sektana! Amsmiz circ. 1000 m. et iterum circ. 1500 m.! Spec. ad Ourika et Mtouga lecta attulerunt cll. Rein et Fritsch!

Ar. Geog. Peninsula Iberica. Gallia australis. Africa boreali-occidentalis.

ACHILLEA (*L. Gen.* 971).

A. SANTOLINA (*DC. Pr.* vi. 31).

Mar. merid.—Ad radices Atlantis Majoris, distr. Reraya semel visa et lecta!

Ar. Geog. Species Orientalis et Algeriensis, præsertim in regione desertorum obvia, a Belutschistan usque ad Imp. Maroccanum. Species affinis (*A. santolinoides*, Lag.) in Hispania austro-orientali.

A. LIGUSTICA (*All. Fl. Ped.* no. 660, tab. 53. fig. 2; *DC. Pr.* vi. 26).

Mar. merid.—In regione inferiore Atlantis Majoris. Legimus in convalle Amsmiz circ. 1300 m.! In rupibus supra Milhaïn! Cel. Cosson benevole comm. spec. in montibus Ouensa et Afougueur ab indigeno Ibrahim lecta!

Spec. nostra a typo paululum diversa sunt, foliis magis hirtulis, rachi sæpe 2- vel 3-dentata.

Ar. Geog. Per Europam australem late diffusa. In Syria et in Africa boreali videtur rara.

—— ——, var. FOLIOSA, *nob.* Differt foliis longioribus flaccidis versus apicem caulis parum diminutis. A typo aspectu valde diversa est, sed characteres graviores non video.

Mar. merid.—Legimus in convalle Aït Mesan a 1600 m. ad 1700 m.! Taradut (*R. et Fr. spec. in Herb. Kew.*)!

In var. nostra folia inferiora ramorum abortivorum in axillis foliorum caulinorum accessoria videntur.

DIOTIS (*Desf. Fl. Atl.* ii. 261).

D. MARITIMA (*L.*, sub *Athanasia*; *Sm. Eng. Fl.* iii. 403),=D. candidissima (*Desf. l. c.*; *DC. Pr.* vi. 34).

Mar. sept.—Tanger! (*ex Herb. Schousboe spec.*)! (*Webb Herb.*)! In plaga Atlantica haud procul Cap. Spartel! Visa inter Tetuan et Ceuta!

Mar. occid.—In maritimis prope Saffi!

Ar. Geog. Secus oras Maris Interni fere totius. Ad litora Oceani ex Anglia usque insulas Canarienses.

ANTHEMIS (*L. Gen.* 645).

A. TUBERCULATA (*Boiss. El.* No. 107; *Voy. Esp.* tab. 90).

Mar. sept.—In monte Djebel Dersa prope Tetuan legit Webb (*spec. in herb. nost.*)!

Mar. merid.—In regione superiore Atlantis Majoris, in monte Djebel Tezah a 2400 m. ad 2700 m.! Ex Djebel Ouensa spec. ab indigeno Ibrahim lectum benev. comm. cel. Cosson!

Ar. Geog. Peninsula Iberica. Montes Africæ borealis.

A. FUSCATA (*Brot. Phyt. Lus.* 15; *Willd. Sp. Pl.* iii. 2182),=Maruta fuscata (*DC. Prod.* vi. 14),=Perideræa fuscata (*Webb, It. Hisp.* 37), =Chamomilla fuscata (*Gren. et God.* ii. 151).

Mar. sept.—Tanger! (*Webb spec.*)! Inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia). Fertur in Græcia, sed deest hæc species in Boiss. Fl. Orientali.

A. TENUISECTA (*Ball, Journ. Bot.* 1873, 368). (Plate XXV.).

Planta biennis (?), elegans, pedalis et ultra, erecto-ramosa; folia sparsa, bipinnatisecta, lobis tenuibus anguste linearibus, juniora cum ramis novellis velutina, demum viridia, pilosa; capitula terminalia, longiuscule pedunculata, pro genere parvula; involucri pauciseriati foliola obtusa, velutina; flosculi fœminei ligulis brevissimis aurantiacis aucti, hermaphroditi numerosi æquales; receptaculi paleæ flosculis æquilongæ, oblongæ, concavæ, scariosæ, apice obtusiusculæ, subdentatæ; achenia curvata, exteriora profunde quinquecostata, in costis tuberculosa.

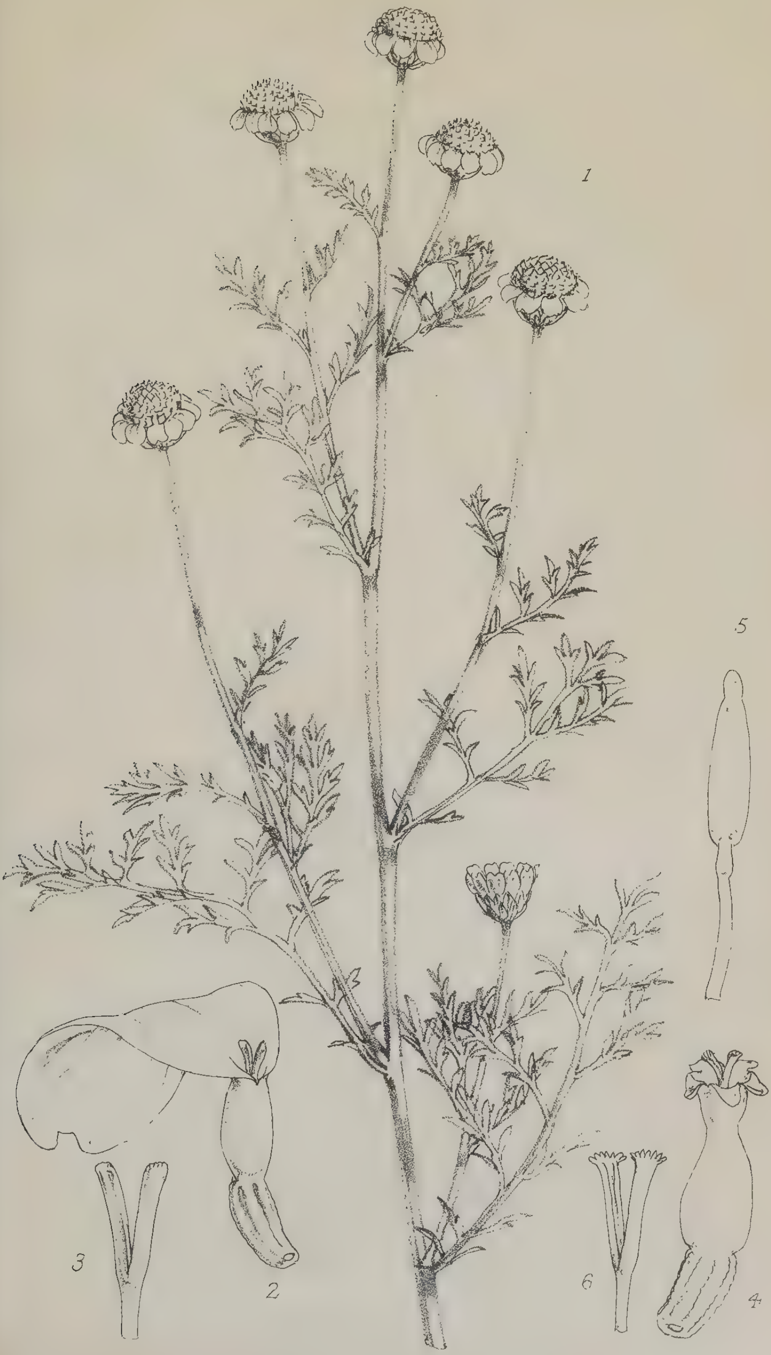
Mar. merid.—Haud procul urbe Marocco! In prov. Mesfioua!

Stirps bene distincta nescio cui proxima. Ob ligulas brevissimas recurvatas videtur discoidea. Ab ovibus erosa, et sub pedibus conculcata specimina sæpius manca et indecora.

A. MIXTA (*L.*, *Rchb. Ic.* xvi. tab. 110),=Ormenis mixta (*DC. Pr.* vi. 18).

Mar. sept.—Tanger! (*Webb Herb.*)! In monte Djebel Kebir! Cap. Spartel!

Mar. occid.—Aïn el Hadjar haud procul Mogador!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Mar. merid.—Mesfioua! Mskala! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia). Rarius occurrit in Europa occidentali.

Variat foliis majoribus pinnis superioribus dissectis. Ligulæ albæ basi plerumque ochroleucæ; in ditione nostra interdum flavæ et insigniter bicolores.

Præter genus Linnæanum, et Cassinianum a Candolleo acceptum, auctores pro hac specie genera plurima—scil. *Marutam, Matricariam, Chamomillam,* et *Chamæmelum*—proposuerunt. Duce cel. Boissier genus *Ormenis* tenere maluissem nisi obstitissent species plurimæ intermediæ, acheniis *O. mixtæ* propiores, sed habitu et facie *Anthemidibus* typicis simillimæ. Demum sententiam celebb. Benth. et Hook. (Gen. Pl. ii. 420) secutus sum, et nomen Linnæanum servavi.

ANTHEMIS HETEROPHYLLA (*Coss. MSS.*, sub *Ormenide*),=Santolina scariosa (*Ball in Journ. Bot.* 1873, 365).

Suffruticosa, caule lignoso, e basi ramosissimo, ramis strictis erectis monocephalis; folia infima pinnatipartita, segmentis laciniatis, media profunde dentata vel pinnatifida, segmentis oblongo-linearibus integris, suprema minima lineari-lanceolata denticulata; involucri foliola apice dilatata, fimbriato-scariosa; flores exteriores plerumque ligulati, ligulis flavis abbreviatis interdum deficientibus; disci corollæ aurantiacæ; receptaculi paleæ ovatæ, acutæ, mucronatæ, apice tantum pubescentes.

Mar. merid.—In regione inferiore et media Atlantis Majoris. Ourika! Aït Mesan! In convalle Amsmiz a 1000 m. ad 2000 m.!

Spec. altera nostris conformia, nisi ligulis longioribus, ex montibus Ouensa et Djebel Afougueur ab indigeno Ibrahim lecta misit cel. Cosson et me certiorem fecit de identitate *A. heterophyllæ* suæ cum *Santolina scariosa* nostra. Species hæc gaudet re vera sæpissime floribus ligulatis et ideo vix in gen. *Santolina* retinenda. Auctoritatem cel. amici libenter agnosco; attamen vera affinitas plantæ nostræ cum *Santolina* quærenda mihi videtur. Facie proxima est *S. oblongifoliæ* (Boiss. Diagn. Pl. Or. ser. ii. fasc. 3, p. 18), sed involucris scariosis (fere *Anacycli radiati,* Lois.), paleis mucronatis, et floribus satis superque distincta est. Achenia immatura tantum vidi, omnino *Santolinis* conformia.

CLADANTHUS (*Cass. in Bull. Philom.* 1816).

C. ARABICUS (*L. Sp. Pl.* 1263, sub *Anthemide*; *Cass. l. c. et Dict.* ix. 342, tab. 87),=Anthemis prolifera (*Pers. Syn.* ii. 32),=Cladanthus proliferus (*DC. Pr.* vi. 18).

Mar. occid.—Casa Blanca! Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Frequens in provinciis meridionalibus usque radices Atlantis Majoris. Prov. Haha! Aïn Oumast! Sheshaoua! Mtouga! Mesfioua! Ourika (*Maw spec.*)!

Ar. Geog. Species Algeriæ occidentalis et Imperii Maroccani incola, nec in Arabia hucusque inventa.

Nomen a Persoonio mutatum quia Patria "Arabia" erronee a Linnæo (*loc. cit.*) indicata. Sed J. Shaw, qui primus hanc stirpem descripsit et delineavit (Spec. Phytog. Afric. No. 58), nomen indigenum *Craffas* ab Arabis Mauritanis applicatum indicavit, et ideo latiore sensu nomen triviale Linnæanum haud improprium nec a posteris mutandum.

Flores interdum, nec semper, suaveolentes.

CHRYSANTHEMUM (*L. Gen.* 966).

C. SEGETUM (*L., DC. Pr.* vi. 64), = Xanthophthalmum segetum (*Sch. Bip. Tanac.* 17).

Mar. sept.—Tanger (*Webb spec.*)! Mense Junio visum sed spec. nulla lecta!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia). In Europa fere omni diffusum, sed fere semper in cultis et verisimiliter introductum.

C. CORONARIUM (*L., DC. Pr.* vi. 64), = Pinardia coronaria (*Less. Syn.* 255).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)! Tetuan!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Passim occurrit in regione inferiore. Legimus in prov. Shedma! Prope Sheshaoua! In ruderatis urbis Marocco!

Ar. Geog. Regio Mediterranea, imprimis calidior (inclusa Macaronesia et ins. Azoricis). Deest in Gallia et in Italia superiore.

C. CARINATUM (*Schousb. Gew. Marok.* 185, tab. 6; *DC. Pr.* vi. 64), = C. tricolor (*Andr. Bot.* ii. tab. 109), = Ismelia versicolor (*Cass. Dict.* xli. 40).

Mar. occid.—Secus rivulum Oued Kseb prope Mogador, ubi primus legit b. Schousboe! Vidimus mense Aprili florentem in atrio v. horto præfecti urbis Mogador.

Ar. Geog. Species propria Maroccana.

Ligulæ albæ basi flavescentes v. interdum purpurascentes.

C. MYCONIS (*L., Boiss. Fl. Or.* iii. 335), = Pyrethrum myconis (*Mœnch, Suppl.* 287; *DC. Pr.* vi. 61), = Coleostephus myconis (*Cass. Dict.* xli. 43).

Mar. sept.—Inter Tanger et Tetuan! Prope Tetuan! (*Webb Herb.*)!

Mar. occid.—Rabat (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea omnis, imprimis in zona litorali (inclusa Macaronesia).

Affinitas hujus et sp. sequentis cum *C. segetum* et *C. coronario*, etsi acheniorum structura diversa.

Chrysanthemum macrotum (*Dur. in Duch. Rev. Bot.* i. 363, et *Expl. Alg.* tab. 56, sub *Coleostepho*), = Myconia macrotus (*Sch. Bip. in Walp. Ann.* i. 421), = Glossopappus chrysanthemoides (*Kze. in Flora*, 1846, 748).

Mar. occid.—Legi in monte Djebel Hadid haud procul Mogador!

Mar. merid.—Spec. unicum incompletum prope Milhaïn ad radices Atlantis Majoris legit J. D. Hooker!

Ar. Geog. Africa borealis. Hispania australis.

Priori valde affine et forsan tantum varietatem sistens. (Confer Cosson, Notes Crit. p. 38, et sententiam adversam cl. Willkomm in Fl. Hisp. ii. 106).

C. GLABRUM (*Poir. Voy.* ii. 241), = C. paludosum (*Desf. Fl. Atl.* ii. 283, tab. 238), = Leucanthemum setabense (*DC. Pr.* vi. 48), = Hymenostemma Fontanesii (*Willk. Fl. Hisp.* ii. 102).

Mar. sept.—Prope Tetuan florentem legi mense Aprili!

Ar. Geog. Peninsula Iberica. Africa borealis.

Confer Boissier et Reuter, 'Pugillus,' 57, qui plantam Africanam a *C. setabensi* diversam judicant. Ego non vidi nisi notas leves differentiales, et vix pro varietatibus diversis haberem.

C. WEBBIANUM (*Coss. ined.*, sub *Pyrethro*).

Mar. sept.—In monte Beni Hosmar pr. Tetuan legit Webb, unde spec. incompletum in herb. nost.! Legimus in eodem monte folia radicalia tantum, mense Aprili!

Mar. merid.—Specimina ex Atlante Majore loco d. Taradut lecta attulerunt cll. Rein et Fritsch, hodie in herb. Kew. conservata! Hæc, haud sine dubio, ad *C. Webbianum* retuli.

Ar. Geog. Species parum nota, forsan per Africam borealem diffusa.

Planta e grege *C. corymbosi*, L., et huic valde proxima. Nisi auctoritate tantorum virorum devinctus pro forma meridionali *C. corymbosi* habuerim. Huc nisi fallor referendum est "*Pyrethrum corymbosum*" ex monte Djebel Zaghouan (*Kralik, Pl. Tunetanæ*, No. 85).

C. GAYANUM (*Coss. et Dur. in Bull. Soc. Bot. Fr.* ii. 14, sub *Pyrethro*), = C. Mawi (*H. fil. in Bot. Mag.*).

Mar. merid.—Occurrit frequentissime in regione inferiore Atlantis Majoris ab 800 m. usque 1800 m. s. m. Legimus in convallibus Ourika! Aït Mesan! Reraya! Amsmiz! et in rupibus supra Seksaoua!

Ar. Geog. Species propria zonæ inferioris montium Africæ boreali-occidentalis.

C. Gayanum affine est *Chrysanthemis* (*Pyrethris* auct.) Hispanicis per Hisp. centralem et australem late diffusis, quorum plurima, scil. *Pyrethrum pulverulentum*, Lag., *Chrysanthemum radicans*, Willd., *C. arragonense*, Asso, *Pyrethrum sulphureum*, Boiss. et Reut., cl. Willkomm sub nomine "*P. hispanicum*" in Flora Hispanica, ii. 98, optimo jure conjunxit. *C. Gayanum* est pariter species valde ludibunda. Planta Maroccana habet involucri foliola minus acuta, intima apice longius scariosa quam specimina Algeriensia quæ vidi, et ligulas fere semper utrinque roseas vel pallide purpurascentes. Hæ mihi videntur notæ instabiles nec varietates definitas sistunt.

—— ——, var. DEPRESSUM, *nob.*

Differt a typo statura humili, ramis basi prostratis florigeris adscendentibus, herba tota viridi subglaberrima, involucri foliolis exterioribus latioribus, margine latiuscule scariosis, interioribus acutiusculis ex nervo ad apicem usque non producto exapiculatis.

Mar. merid.—In Atlantis Majoris regione superiore a 2200 m. usque 3000 m.! Aït Mesan supra Arround! In jugo Tagherot! In monte Djebel Tezah!

Facie a typo satis diversa est planta nostra, nec transitum vidi; tamen pro varietate sine dubio habui.

CHRYSANTHEMUM MARESII (*Coss. in Bull. Soc. Bot. Fr.* ii. 16, sub *Pyrethro*), var. HOSMARIENSE (*Ball in Journ. Bot.* 1873, 366).

Mar. sept.—In parte superiore montis Beni Hosmar versus 1000 m.!

Planta nostra inter *C. Maresii* et *P. arundanum* (Boiss. Voy. Esp. 317), mihi nonnisi ex descriptione notum, ambigua videtur. *Pyrethro arundano* foliis et habitu valde affinis, differt tamen (ex fructu immaturo nimis incerto) acheniis 10-costatis, corona brevi inæquali subintegra donatis, nec 5-costatis, corona dentato-lacera.

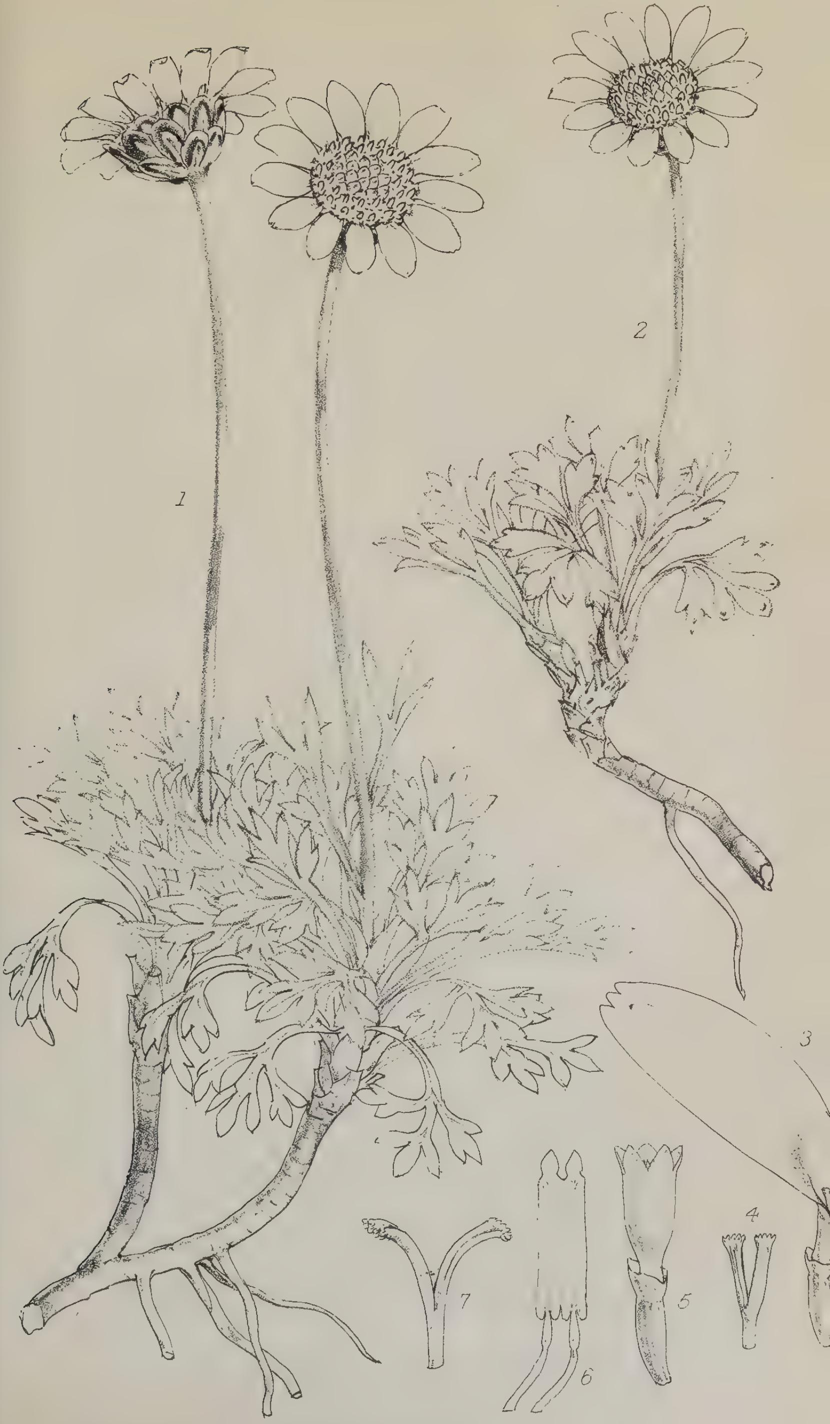
Ar. Geog. Africa boreali-occidentalis.

C. ATLANTICUM (*Ball in Journ. Bot.* 1873, 366). (Plate XXVI.).

Perenne, subcæspitosum; rhizoma divisum; folia radicalia fasciculata, inæqualiter trisecta, lobo medio ternato, lateralibus a parte exteriore lobulo auctis, laciniis ovatis vel late oblongis, omnia pilosa, in pagina superiore demum calvescentia; pedunculi aphylli vel basin versus folio trisecto instructi; involucri foliola late oblonga, apice rotundata, pallide virentia nervo obscure viridi notata, margine lato fusco-scarioso; ligulæ latiusculæ ex albo rubellæ, subtus striis 4 saturatioribus notatæ; achenia 10-alata, alis diametrum achenii æquantibus in coronam brevem subæqualem productis. Stylus brevissime bifidus pseudoclavatus.

Mar. merid.—In regione superiore Atlantis Majoris. In jugo Tagherot! et in monte Djebel Tezah! a 2400 m. ad 3200 m.

Species, ut videtur, omnino distincta, et præter cæteras notas acheniis



CHRYSANTHEMUM ATLANTICUM, Ball.

insignibus a *C. Gayano* aliena. Structura fructus est tamen in *Chrysanthemis* valde variabilis.

CHRYSANTHEMUM CATANANCHE (*Ball in Journ. Bot.* 1873, 366; *H. fil. in Bot. Mag.* c. tab. 6107).

Perenne, subcæspitosum; rhizoma lignosum, divisum; scapi adscendentes, infra medium foliacei; folia parva trifida, laciniis trisectis, dentatis simplicibusve, omnia in petiolum linearem limbo 3–4 longiorem attenuata; capitula magna solitaria; involucri foliola laxe imbricata, ovato-lanceolata, acutiuscula, albo-scariosa, lucentia, dorso cartilagineo vel herbaceo parce pilosa; flosculi pro genere pauci, fœminei longe ligulati, hermaphroditi lutei antheris breviores; achenia (immatura) costato-alata, alis 4 vel 6, exteriora pappo auriculæformi ipsi achenio æquali, interiora (disci) pappo brevi inæquali subauriculato coronata; stylus bifidus ramis demum recurvis.

Mar. merid.—In regione superiore Atlantis Majoris. Ex convalle Aït Mesan usque in jugum Tagherot! In monte Djebel Tezah! a 2300 m. ad 3200 m.

Species insignis, decus florulæ alpinæ Atlantis. In planta spontanea ligulæ color ægre definienda ex ochroleuco purpurascens, basi atro-rubens. In planta culta ligulæ fiunt flavescentes.

Ducibus celebb. Bentham et Hooker (Gen. Plant. ii. 424 et seq.) species Maroccanas e grege *Tanacetearum* in genera tria—*Chrysanthemum, Matricaria,* et *Tanacetum*—distribui, nec alium ordinem magis naturalem apud auctores summos invenire potui. Sed revera normæ ad genera naturalia stabilienda in hac serie prorsus desunt, dum characteres ex floris et fructus structura desumpti cum ratione vitali et evolutionis ordine non conveniunt. Etiam auctores qui genera nova facillime admiserunt species toto cœlo alienas in eodem genere collocarunt, dum alias quam maxime affines nomine generico diverso salutarunt. Confer Willkomm in 'Flora Hispanica':—*Pyrethrum alpinum* et *P. corymbosum*; et contra, *Matricaria Chamomilla, Chamæmelum inodorum* et *Otospermum glabrum,* et sex species *Chrysanthemorum* ligulis aureis in genera quinque distributas.

MATRICARIA (*L. Gen.* 967).

M. CHAMOMILLA (*L., DC. Pr.* vi. 51).

Mar. sept.—Tanger (*Webb Herb.*)!

Ar. Geog. Species per Europam omnem (exclusa arctica), regionem omnem Mediterraneam (inclusa Macaronesia), et Sibiriam Uralensem dispersa.

M. GLABRA (*Lag. Elench. Hort. R. Matr.* 1805; *Gen. et Sp.* 30, 1816; et *DC. Pr.* vi. 55, sub *Pyrethro*), = Pyrethrum arvense (*Salzm. Exsicc.* 1825; *DC. Pr. loc. cit.*), = Chamæmelum arvense (*Rchb. fil.*), = Otospermum glabrum (*Willk. Fl. Hisp.* ii. 94), = Pyrethrum Tingitanum (*Bernh. Ind. Sem. Erf.* 1833).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Cap. Spartel! Ex collibus inter Tanger et Tetuan! Tetuan (1851)!

Ar. Geog. Peninsula Iberica australis et Africa Tingitana. Beatus Sch. Bipontinus (Tanac. p. 49) veram affinitatem hujus et sequentis sp. primus indicavit.

MATRICARIA FUSCATA (*Desf. Fl. Atl.* ii. 283, tab. 237, sub *Chrysanthemo*; *Willd. Sp. Pl.* iii. 2156, et *DC. Pr.* vi., sub *Pyrethro*).

Mar. sept.—? Tanger (*Webb Herb.*)!

Planta Webbiana a me non diligenter explorata incerta manet. Legi prope Tingidem spec. nana *M. glabræ* e basi ramosa huic simillima, etsi involucri et acheniorum structura satis diversa.

Ar. Geog. Hucusque nonnisi in Algeria meridionali et in agro Tunetano detecta.

Hæc species inter *Chrysanthemum* et *Matricariam* ambigua est sed ob affinitatem cum priore huc referenda.

M. PUBESCENS (*Desf. Fl. Atl.* ii. 284, et *DC. Pr.* vi. 80, et *Benth. et Hook. Gen. Pl.*, sub *Cotula*; *Coss. et Kralik in Bull. Soc. Bot. Fr.* iv. 279, sub *Chlamydophora*).

Mar. merid.—Ex Oasi Akka spec. ab indigeno Mardochæo lecta benev. comm. cel. Cosson!

Ar. Geog. Sahara Algeriensis et Maroccana.

M. maroccana (*Ball in Journ. Bot.* 1873, 367).

Annua, pumila, e basi ramosissima; caules scapiformes, inferne foliosi; folia subglaberrima, pinnatisecta, segmentis linearibus, sæpius alternis integris dentatisve; involucri hemisphærici post anthesin incurvi foliola subæqualia, scariosa, biseriata, paucis brevioribus basi adjectis; flosculi fœminei ligulati, ligulis diametrum disci subæquantibus, hermaphroditi breves, steriles fertilibus intermixti; achenia sessilia, incurva, subcylindrica, lucentia, sub lente minutissime striolata, pappo caduco, auriculæformi, versus apicem dilatato, tubum corollinum æquante vel superante, coronata.

Mar. merid.—In prov. meridionalibus Imperii Maroccani sat frequens. Shedma! Aïn Oumast! Mesfioua! Aïn Tarsil!

Affinitatem proximam cum *Cotula pubescente*, Desf. *loc. cit.* jam indicavi; sed ex floribus fœmineis semper ligulatis, et illis disci minus numerosis, herbæ glabritie, cæterisque notis minoris momenti, pro specie diversa habui. Hodie ad subspeciem reducenda videtur. Pace celebb. Bentham et Hooker hæc cum *Chlamydophora tridendata* (Ehrbg., DC. Pr. vi. 139) melius in genere *Matricaria* cum proxime affini *M. auriculata* (Boiss. Diagn. Pl. Or. ser. 1, xi. 23, sub *Chamæmelo*) collocanda est. *Chlamydophora tridentata* spontanea, ex spec. a me lectis, et ex descript. auctorum, semper discoidea est. In hac tamen, culta in Horto Paroliniano ex sem. Ægyptiacis, flores exteriores radiantes gaudent ligulis flavis.

TANACETUM (*L. Gen.* 944).

T. ANNUUM (*L., DC. Pr.* vi. 131).

Mar. sept.—Tanger! legi spec. nondum florens. Habui ex herb. Schousboe! (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

ARTEMISIA (*L. Gen.* 945).

A. HERBA ALBA (*Asso, Syn.* No. 810, viii. tab. 1),=A. arragonensis (*Lam. Dict.* ii. 269; *DC. Pr.* vi. 101).

Mar. sept.—Tanger (*Schsb. spec.*)! Mers el Kebir (*Webb spec.*)!

Mar. merid.—Vidimus nondum florentem in prov. Shedma! et alibi in regione inferiore, et ad radices Atlantis Majoris prope Ourika!

Ar. Geog. In Hispania imprimis centrali et in convallibus calidioribus Pyrenæorum. Africa boreali-occidentalis. Ex Algeria spec. non vidi.

Legi in convalle Amsmiz ad circ. 1400 m. specimina nondum florifera sp. novæ (*A. maroccanæ*, Coss. MSS.) nondum publici juris factæ.

A. ABSINTHIUM (*L., DC. Pr.* vi. 125).

Mar. merid.—? Specimen nondum florens in prov. Mtouga lectum verisimiliter huc referendum!

Ar. Geog. Europa omnis et Asia temperata. Regio omnis Mediterranea.

SENECIO (*L. Gen.* 1216).

S. VULGARIS (*L., DC. Pr.* vi. 341).

Mar. sept.—Tanger!

—— ——, var. TENERIFFÆ,=S. teneriffæ, *Sch. Bip.*

Mar. merid.—In monte Djebel Tezah ad 2200 m.!

Ar. Geog. Species per regiones temperatas orbis veteris fere ubique diffusa. In America boreali verisimiliter introducta.

S. lividus (*L., DC. Pr.* vi. 343).

Mar. sept.—In monte Djebel Kebir prope Tanger! Cap. Spartel!

—— ——, var. PINGUIS, *nob.* Caule humili crassiore; planta facie et odore *S. viscosum* simulans, achenia tamen pubescentia.

Mar. merid.—In regione alpina Atlantis Majoris. Legi in jugo Tagherot ultra 3000 m.!

Ar. Geog. Regio Mediterranea, imprimis Europæ australis. Species deest in Asia Mediterranea, in Ægypto, et in Macaronesia.

Var. nostra forsan ad *S. fœniculaceum* (Ten., DC. Prod. *l. c.*) referenda est; hic certe inter formas *S. lividi* enumerandus.

S. LEUCANTHEMIFOLIUS (*Poir. Voy.* ii. 238; *DC. Pr.* vi. 344),=S. humilis (*Desf. Fl. Atl.* ii. 271; *DC. Pr. l. c.*),=S. glaucus (*DC. Pr.*

l. c., non L.),=S. hyemalis (*Salzm Exsicc.*),=S. vernus (*Biv. Cent.* i. 73),=S. trilobus (*L., sec. Willk. et Lge.*).

Mar. sept.—Satis frequens prope Tanger (*Salzm. Exsicc.*)! Legimus in monte Djebel Kebir! et ad Cap. Spartel! Prope Tetuan!

Mar. occid.—Mogador! Aïn el Hadjar!

—— ——, var. MAJOR, *nob.* Differt statura majore, foliis basi auriculatis, ligulis longioribus sæpius expansis.

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Specimina majora hujus var. nimis proxima sunt *S. petræo* (Boiss. et Reut. Pug. 50); hic, ut mihi videtur, inter formas *S. leucanthemifolii* enumerandus.

Ar. Geog. *S. leucanthemifolius* per regionem Mediterraneam australem satis frequens fit rarior in Oriente et in Peninsula Iberica. Deest in Macaronesia, ubi tamen nascitur subspecies mox enumeranda.

Hæc est species polymorpha cujus limites ægre definiendi. Proximus est, sed, ut videtur, satis diversus, *S. vernalis*, W. K., per regionem Mediterraneam orientalem diffusus, species pariter polymorpha, cujus varietates cum formis *S. leucanthemifolii* sæpe commutantur.

Senecio crassifolius (*Willd. Sp. Pl.* iii. 1982; *DC. Pr.* vi. 344).

Mar. occid.—Mogador (*Lowe Cat.*). In rupibus insulæ Mogador!

Ar. Geog. Nascitur hinc inde in maritimis per regionem omnem sp. præcedentis, cujus sistit subspeciem, seu forsan varietatem maritimam. In Macaronesia etiam obvia.

Ex capitulis crassioribus et foliis incrassatis subcarnosis hæc stirps a præcedente facie diversa est, sed non video notas diagnosticas stabiles, et non desunt formæ intermediæ.

S. GALLICUS (*Chaix in Vill. Dauph.* i. 331; *DC. Pr.* vi. 346),=S. squalidus (*Willd. Sp. Pl.* iii. 1991, *an L.*?),=S. coronopifolius (*Willd. non Desf.*).

Mar. merid.—In planitie haud procul urbe Marocco spec. legit J. D. Hooker!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

—— ——, var. SONCHIFOLIUS, *nob.* Forsan est *S. auriculatus* (Desf. Fl. Atl. ii. 272, non Vahl). Differt foliis flaccidis irregulariter pinnatifidis basi in auriculam expansis. Plane apparet esse forma *S. gallici* locis humidis umbrosis enata.

Mar. merid.—In horto irrigato Ben Dreis urbis Marocco!

S. coronopifolius (*Desf. Fl. Atl.* ii. 273; *DC. Pr.* vi. 344).

Mar. merid.—Specimen unicum in convalle Aït Mesan ad 1100 m. alt. legit cel. Hooker! Frustulum in Oasi Akka ab indig. Mardochæo lectum benev. comm. Cosson!

Ar. Geog. Regio Mediterranea calidior a Persia et Arabia usque insulas Canarienses. Nascitur etiam in Græcia et in Asia temperata.

Hic mihi videtur *S. gallici* proles in regionibus siccis calidioribus enata. Est fere certe *S. glaucus*, L. Sp. Pl. 1217; sed nomen ab auctoribus confusum hodie melius negligendum.

SENECIO ERRATICUS (*Bert. Amœn. It.* 42; *DC. Pr.* vi. 349).
Mar. sept.—Tanger (*Webb Herb.*)! Legi nondum florentem et ideo incertum in monte Djebel Kebir!
Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia).

S. FOLIOSUS (*Salzm. Exsicc.* 1825; *DC. Pr.* vi. 351).
Mar. sept.—Tanger (*Salzm. Exsicc.*), in Herb. Kew.!
Ar. Geog. Ditio Tingitana. Hispania fere omnis, sed infrequens.
Mihi videtur nimis proximus *S. prœalto*, Bert.

S. GIGANTEUS (*Desf. Fl. Atl.* ii. 273, tab. 234; *DC. Pr.* vi. 349).
Mar. merid.—Frequens secus rivulosad radices Atlantis Majoris. In Aït Mesan spec. nondum florentia legimus! et pluries alibi vidimus!
De identitate plantæ Maroccanæ non certissimus sum sed, habitus et folia conformia sunt. Caules a 6- usque 10-pedales et ultra; folia subtus leviter araneosa.
Ar. Geog. Africa boreali-occidentalis.

S. DORONICUM (*L.*, *DC. Pr.* vi. 357), var. HOSMARIENSE (*Ball, Journ. Bot.* 1873, 367).
Differt a typo caule breviore, foliis caulinis paucis angustis inferioribus 2–3, limbo lato, in petiolum attenuatis, radicalibus late ovatis, basi truncata vel subcordata, in petiolum non decurrentibus.
Mar. sept.—In monte Beni Hosmar, prope Tetuan, altit. s. m. circ. 1000 m.!
Achenia immatura glabra.
Ar. Geog. *S. Doronicum* per montes excelsiores Europæ mediæ et australis a Carpathiis usque Apenninos et Pyrænæos diffusus est. In regionibus confinibus adsunt formæ plurimæ arcte affines, sicut subspecies vel varietates enumerandæ. In Europa orientali adest e. g. *S. transylvanicus*, Boiss., in Gallia australi *S. Gerardi*, Gren. et God., in Hispania septentrionali *S. Lagascanus*, DC., in Hispania media *S. Carpetanus*, Boiss. et Reut., demum in Hispania Bætica *S. eriopus*, Willk. Hic novissimus pl. nostræ notis nonnullis accedit, at differt caule aphyllo et foliis subtus albo lanuginosis.

S. PTERONEURA (*DC. Pr.* vi. 338, sub *Kleinia*).
Mar. occid.—Legimus mox floribundum in arenosis prope Mogador, ubi primus legit Broussonnet!
Ducibus celebb. Bentham et Hooker (Gen. Pl. ii. p. 447 et seq.) sub genere *Senecione* hanc plantam insignem enumeravi.
Ar. Geog. S ecies Maroccana.

CALENDULA (*L. Gen.* 990).

C. OFFICINALIS (*L., DC. Pr.* vi. 451).

Mar. sept.—In regione collina inter Tanger et Tetuan! In rupibus prope Tetuan!

Specimina nostra plantam spontaneam ostendunt quam ego nullibi in Europa vidi.

Ar. Geog. Sæpe recurrit per Europam calidiorem, sed vix aut ne vix spontanea videtur. Desideratur in Boissier, 'Fl. Orientali,' et spec. pl. spontaneæ non viderunt Willk. et Lange (cf. Fl. Hisp. ii. 126).

Species probabiliter ex Africa boreali in hortis Europæis olim allata.

C. ARVENSIS (*L., DC. Pr.* vi. 452).

Mar. sept.—Tanger! (*Webb Herb.*)!

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*).

Ar. Geog. Regio omnis Mediterranea, unde per Europam temperatam in cultis introducta fuit.

—— ——, var. BICOLOR (*DC. Pr. l. c.*),=C. bicolor (*Raf. Caratt.* p. 82; *Boiss. Fl. Or.* iii. 418).

Mar. sept.—Inter Tanger et Tetuan!

Ar. Geog. In Sicilia, Græcia, Ægypto et ins. Canariensibus indicata; verisimiliter per regionem fere omnem Mediterraneam dispersa.

—— ——, var. ECHINATA, *nob.*,=C. echinata (*DC. Pr.* vi. 453).

Mar. occid.—Prope Mogador legit et ill. A. P. De Candolle communicavit Broussonnet. Legimus in prov. Haha haud procul Mogador spec. descript. Candolleanæ conformia!

Mar. merid.—In prov. Shedma legit J. D. Hooker! Ad radices Atlantis Majoris legi prope Amsmiz!

Ar. Geog. Forma hujus sp. polymorphæ propria Imp. Maroccani.

—— ——, var. MICRANTHA, *nob.* Forma *C. parvifloræ* (Raf. Caratt. 83) valde proxima. Hæc tamen suadente cel. Cosson inter formas *C. stellatæ* enumeranda est; ex acheniorum structura spec. nostra ad *C. arvensem* retuli. Gaudet ramis suberectis, floribus quam in *C. arvensi* dimidio minoribus.

Mar. occid.—In maritimis haud procul Mogador!

Mar. merid.—In Oasi Sheshaoua! et in planitie ab urbe Marocco meridiem versus!

C. STELLATA (*Cav. Ic.* i. 3, tab. 5; *DC. Pr.* vi. 454),=C. sicula (*Cyr., DC. Pr.* vi. 452).

Mar. merid.—In aridissimis pr. Aïn Oumast! Mskala! Seksaoua!

De hac specie confer Cosson et Kralik in Bull. Soc. Bot. Fr. iv. 282. Præter synonyma a cll. auctoribus allata addenda erit forsan *C. palæstina* (Boiss. Diagn. Pl. Or. ser. 1, x. 83). Specimina nostra omnia locis aridis enata ex ligulis brevibus et foliis angustis ad *C. ægyptiacam*, Desf., accedunt, et notas diagnosticas stabiles vix invenies.

Ar. Geog. Species ludibunda per Africam borealem late diffusa, nascitur etiam in Sicilia et in Gallia australi et in Hispania austro-orientali, nec deest forma quam maxime affinis (*C. palæstina*) in Oriente.

CALENDULA SUFFRUTICOSA (*Vahl, Symb.* ii. 94; *DC. Pr.* vi. 453; *Boiss. Voy. Esp.* tab. 99), = C. marginata (*Willd. Enum. Hort. Berol.* 935).

Mar. sept.—Tanger!

Mar. occid.—Casa Blanca!

Mar. merid.—In collinis prov. Haha!

Ar. Geog. Per Africam borealem late diffusa, habitat etiam in Hispania australi, in Lusitania et in ins. Canariensibus. Forma arcte affinis (subspecies vel varietas) *C. fulgida*, Raf., nascitur in Sicilia, nec a specie separanda est *C. Noëana*, Boiss., in agro Byzantino et in Rumelia inventa.

Inter synonyma hujus speciei enumeranda est *C. lusitanica* (Boiss. Diagn. Pl. Or. ser. 1, x. 83) in rupibus Cintra prope Olyssiponem a cl. Guthnick et a me lecta. Achenia matura non vidi, nec habuit cel. auctor, sed a *C. suffruticosa* non mihi differre videtur nisi foliis latioribus apice rotundatis. Hæc vidi in var. mox enumeranda, nec desunt interdum in sp. affini *C. sinuata* (Boiss. et Gaill. Diagn. Pl. Or. ser. 2, vi. 109).

—— ——, var. TOMENTOSA, = C. tomentosa (*Desf. Fl. Atl.* iii. 305, tab. 245), = C. incana (*Willd. Sp. Pl.* iii. 2341; *DC. Pr.* vi. 452).

Mar. sept.—Tetuan in rupibus (1851)! In monte Beni Hosmar! Ex Imp. Maroccano attulit Broussonnet, sed locus natalis haud indicatur.

Forma a specie aspectu satis diversa, sed characteres a fructu desumpti nimis variabiles, et nullo jure pro specie diversa, in Willk. et Lange, Fl. Hisp. ii. 126, enumerata.

C. maroccana (*Ball in Journ. Bot.* 1873, 367).

Radix perennis; folia angusta elongata, inferiora lanceolata integra, vel in spec. macrioribus leviter repando-dentata, superiora linearia, omnia acuta; rami graciles erecti 6–24-pollicares; capitula quam in *C. suffruticosa* minora; ligulæ angustæ pallide flavæ vel citrinæ; achenia exteriora immarginata in rostrum tenue, involucrum ter superans, apice uncatum obtusum, producta, media margine cartilagineo pectinata, dorso cristulata, intima transverse rugosa.

Mar. merid.—Habitat in regione inferiore et in convallibus calidioribus Atlantis Majoris. Amsmiz! Mzouda! Seksaoua! necnon in rupestribus haud procul urbe Marocco, *G. Maw*! Lusum foliis latioribus legimus in convalle Aït Mesan! et in monte Djebel Tezah!

Facie a *C. suffruticosa* valde, diversa, dignoscitur imprimis habitu gracillimo, et, præter alias notas, rostro acheniorum exteriorum longiore tenuiore, margine mediorum dilatato pectinato, et foliis semper basin versus attenuatis margine non denticulatis. A *C. stellata* præter habitum singularem statim distinguitur radice perenni et rostro acheniorum obtuso, uncato. Pro specie propria habuerim, sed in hoc genere characteres stabiles omnino desiderantur.

ECHINOPS (*L. Gen.* 999).

E. SPINOSUS (*L., DC. Pr.* vi. 525).

Mar. merid.—Sat frequens in planitie et ad radices Atlantis Majoris usque 1500 m. alt. Legimus juxta Aïn Oumast! prope urbem Marocco! Seksaoua! In convalle Aït Mesan! et in prov. Mtouga, unde spec. attulerunt etiam cll. Rein et Fritsch!

Ar. Geog. Africa borealis. Fertur etiam in Syria et in insula Cypro, sed a recentioribus non visus.

Specimina nostra inter plantam Ægyptiacam et *E. Bovei* (Boiss. Diagn. Pl. Or. ser. 1, vi. 99) ambigua sunt. Hunc ad varietatem reducendum esse ipse cel. Boissier (Fl. Or. iii. 429) suspicatus est. Antiqui, ut mihi videtur, formam intermediam cognoverunt et hanc pro typo speciei habuit Linnæus. Tabula citata Dodonæi (Pemptades, ed. i. 710, ed. ii. 722) potius ad plantam nostram quam ad Ægyptiacam referenda videtur. Eandem tabulam reproduxit Parkinson (Theatr. 977).

E. STRIGOSUS (*L., DC. Pr.* vi. 526).

Mar. merid.—Videtur infrequens in regione inferiore. Legimus inter Tasseremout et Ourika! et in distr. Reraya! Specimen prope Sektana lectum in Herb. Kew. coll. R. et Fr.!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

XERANTHEMUM (*L. Gen.* 947).

X. MODESTUM (*Ball in Journ. Bot.* 1873, 368).

Affine *X. squarroso*, Boiss. Diagn. Pl. Or. ser. 1, fasc. vi. p. 101, at differt insigniter hisce notis: involucri foliola exteriora angustiora, interiora anguste lanceolata mucronata (nec mutica), vix aut ne vix colorata, multo breviora (nec radiantia), paleas receptaculi integras lineares parum (nec triplo) superantia.

Mar. merid.—In regione inferiore et media Atlantis Majoris. Ludit erectum, 6–10-pollicare, prope Seksaoua! et nanum, caule e basi 2–3-furcato, foliis latioribus basi semiamplexicaulibus, in convalle Aït Mesan! et in monte Djebel Tezah! Altit. a 1200 m. ad 2000 m.

Achenia nigra, adpresse pilosa, striolata; pappi radii in setam scabram abrupte angustati, longiores paleis receptaculi æquilongi; folia (ut in *X. squarroso*) undique lanata mucrone nudo apiculata, mucro foliorum superiorum sæpe in apicem cartilagineum involucri foliolo similem productus. A *X. inaperto*, W., præter alias notas, differt receptaculi paleis integris.

CARLINA (*L. Gen.* 929).

C. LANATA (*L., DC. Pr.* vi. 546).

Mar. merid.—Seksaoua! Mtouga? (spec. incertum)!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

C. RACEMOSA (*L., DC. Pr.* vi. 547), = C. sulfurea (*Desf. Fl. Atl.* ii. 251, tab. 224).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *Atractylide gummifera*)! (*Schousb. Herb.*)!

Mar. occid.—Mazagan! Saffi!

Mar. merid.—In regione inferiore pluries visa. Mesfioua! Prov. Shedma (*J. D. H. spec.*)!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Sardinia. Corsica.

C. INVOLUCRATA (*Poir. Voy.* ii. 234; *DC. Pr.* vi. 547).

Mar. occid.—In agro Mogadorensi (*Broussonnet ex DC. loc. cit.*).

Ar. Geog. Africa borealis. Hispania. Oriens.

ATRACTYLIS (*L. Gen.* 939).

A. CANCELLATA (*L., DC. Pr.* vi. 550).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub "*A. canescens*")! Tetuan (1851)!

Mar. occid.—Aïn el Hadjar haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Satis frequens in regione inferiore et in convallibus calidioribus Atlantis Majoris!

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia).

A. CÆSPITOSA (*Desf. Fl. Atl.* ii. 254, tab. 225; *DC. Pr.* vi. 550).

Mar. merid.—Ex prov. Mtouga spec. attulerunt Rein et Fritsch!

Ar. Geog. Africa boreali-occidentalis.

A. HUMILIS (*L., DC. Pr.* vi. 550).

Mar. merid.—Spec. exsiccata anni præcedentis legi in lapidosis aridissimis pr. Aïn Oumast!

Ar. Geog. In calidioribus Hispaniæ et Galliæ Narbonensis, et in Imp. Maroccano. Indicatur in Italia, sed nemini recentiorum, quoad sciam, obvia fuit.

A. FLAVA (*Desf. Fl. Atl.* ii. 254; *DC. Pr.* vi. 551).

Tabula Fontanesiana No. 262 a Candolleo citata deest in duobus a me scrutatis exemplaribus 'Floræ Atlanticæ,' nec in calce operis citatur.

Mar. merid.—? Legi specimen incertum in alveo torrentis Ourika, caule bicephalo exsiccato anni præcedentis, alteroque immaturo nondum florifero præditum!

Planta ulterius inquirenda.

Ar. Geog. Africa borealis. Arabia. Belutschistan.

ATRACTYLIS MACROPHYLLA (*Desf. Fl. Atl.* ii. 255, tab. 226; *DC. Pr.* vi. 548, sub *Carlina*).

Mar. merid.—Ad radices Atlantis Majoris et in convallibus calidioribus. Aït Mesan! Seksaoua! Pr. Aïn Tarsil!

Pulchra species, 2–3-pedalis, habitu *Kentrophylli arborei*, in 'Fl. Atlantica' sat bene delineata. Ex spec. incompletis immaturis, mihi videtur vera *Atractylis*, nec inter *Carlinas* enumeranda.

Ar. Geog. Africa boreali-occidentalis.

CARDUUS (*L. Gen.* 925, pro parte).

C. MACROCEPHALUS (*Desf. Fl. Atl.* ii. 245; *DC. Pr.* vi. 621).

Mar. sept.—Djebel Dersa pr. Tetuan (*spec. ex Herb. Webb*)!

Mar. merid.—Specimen unicum immaturum in convalle Aït Mesan legit J. D. Hooker! Specimen in monte Djebel Afougueur ab indig. Ibrahim lectum benev. comm. cel. Cosson!

Ar. Geog. Nascitur in Africa boreali, in regno Neapolitano, et in Græcia.

Cel. Boissier (Fl. Or. iii. 516) hunc cum *C. nutante* conjunxit. Pace tanti viri mihi videtur forma tam constans ut pro subspecie habeatur. Diu hæsi an sp. sequentem etiam pro subspecie haberem. Characteres certos ex involucro et fructu desumptos non video, sed habitus et ratio vitalis nimis diversa videntur.

C. BALLII (*H. fil.*; *Ball in Journ. Bot.* 1873, 368).

Planta biennis, subacaulis, scapos 3–4 simplices crassos, sæpius abbreviatos, rarius pedales, monocephalos, paucifoliatos emittens; herba tota araneoso-canescens; folia radicalia pinnatifida, segmentis lobato-dentatis margine spinosis, superiora (in scapis pl. macrioris) angusta, linearia, spinoso-dentata; involucrum regulariter imbricatum, 7–9-seriatum, foliolis omnibus acutis, adpressis, nervo prominulo in mucronem producto munitis, interioribus subscariosis; pappus elongatus.

Mar. merid.—In clivo septentrionali Atlantis Majoris. Seksaoua! circa 1200 m. Aït Mesan! a 1700 m. ad 2400 m. Djebel Tezah! a 1600 m. ad 2000 m.

Facie *Carduo* nullo mihi cognito, nisi forte *C. Schimperi*, Hochst., sp. Abyssinicæ, comparandus.

Ex anthodii structura in grege *C. nutantis* collocandus, sed evolutionis ratione omnino diversus est. In illo et in *C. macrocephalo* caulis evolutus ramosus, in nostro etiam dum scapi fiunt elongati semper simplices crassi sunt, ex folii basi obsolete decurrente hinc inde spinulosi. Involucri foliola magis adpressa numerosiora in series 7–9, nec 5–6, disposita. Floret ineunte Majo, mense citius quam *C. macrocephalus*.

In convalle Aït Mesan legi specimen unicum incertum foliis valde spinosis, forsan hybridum inter *C. Ballii* et aliam speciem.

CARDUUS MYRIACANTHUS (*Salzm. Exsicc.*; *DC. Pr.* vi. 624),=C. confertus (*Mor. St. Sard. El.* ii. 5, *non Guss., nec Ten.*).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb spec.*)! Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)! Mogador (*Broussonnet, ex DC. Prod.*).

Mar. merid.—Prov. Shedma! Mesfioua! Mtouga!

Ar. Geog. Ditio Maroccana. Hispania australis (nonnisi in arenosis isthmi Gibraltarici sec. Willkomm). Sardinia.

An satis differt *C. Reuterianus* (Boiss. Diagn. Pl. Or. ser. 2, iii. 43),=*C. Bourgæanus* (Boiss. et Reut. Pug. 62, non Sch. Bip.),=*C. myriacanthus* (Boiss. Voy. Esp.), quocum teste cl. Lange conjungendus est *C. pteracanthus* (Durieu, Expl. Alg. tab. 50), planta per Hispaniam et Algeriam latiuscule diffusa, dijudicare non audeo.

C. PYCNOCEPHALUS (*Jacq. Hort. Vind.* i. 17, tab. 44; *Boiss. Fl. Or.* iii. 520, *an L.*?).

Mar. occid.—Huc verisimiliter spec. a cl. Lowe prope Mogador lectum (*C. tenuiflorus*, Lowe Cat.).

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia), necnon in Britannia et Gallia occidentali. In Europa centrali forsan cum seminibus introductus.

—— ——, var. TENUIFLORUS, *nob.*, ramis latius alatis,=C. tenuiflorus (*Curt. Fl. Lond.* vi. tab. 55). Confer Boiss. Fl. Or. iii. 521.

Mar. merid.—Mtouga!

—— ——, var. SARDOÜS, *Boiss. l. c.*,=C. Sardoüs (*DC. Pr.* vi. 626).

Mar. merid.—Mesfioua!

Species polymorpha, cui, suadente cel. Boissier, conjungendi sunt *C. arabicus*, Jacq., *C. albidus*, M. B., et *C. cinereus*, M. B.

CNICUS (*L. Gen.* 926).

Ducibus celebb. Bentham et Hooker (Gen. Pl. ii. 468) genus a recentioribus male mulcatum ad normam Linnæanam restitui. Auctores recentiores gravissimi nomen Tournefortianum *Cirsium Cnico* Linnæano anteposuerunt, sed definitionem genericam Tournefortianam servare non potuerunt.

C. GIGANTEUS (*Willd. Sp. Pl.* iii. 1671; *Desf. Fl. Atl.* ii. 245, tab. 221, sub *Carduo*),=Cirsium giganteum (*Spreng. Syst.* iii. 375; *DC. Pr.* vi. 637),=Carduus scaber (*Poir. Voy.* ii. 231).

Mar. sept.—Vidi nondum florentem pr. Tanger!

Ar. Geog. Africa borealis. Italia meridionalis. Sicilia. Sardinia. Hispania australis prope Fretum Herculis.

Nomen Poiretianum antiquius a Fontanesio immerito mutatum, sed a recentioribus prætermissum, in lucem revocare nolui.

CNICUS ECHINATUS (*Desf. Fl. Atl.* ii. 247, sub *Carduo*; *Willd. Sp. Pl.* iii. 1668), = Cirsium echinatum (*DC. Fl. Fr.* v. 465, et *Prod.* vi. 638).

Mar. merid.—? Frustulum spec. nondum florentis in convalle Aït Mesan circ. 1800 m. legit J. D. Hooker!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

C. ORNATUS (*Ball in Journ. Bot.* 1873, 368).

Caulis erectus, 5-pedalis et ultra; folia radicalia bipedalia, anguste lanceolata, profunde sinuata, caulina subintegerrima, basi semiamplexicaulia, decurrentia, suprema bracteiformia, omnia pannoso-lanata, in pagina inferiore nervosa, margine ad terminum nervorum divergentium spinis validis aureis ornata; involucri foliola regulariter imbricata, dorso herbacea, margine minute ciliolata, exteriora breviter mucronata, interiora linearia, apice scariosa colorata; achenia (nimis immatura) indescripta.

Mar. merid.—In Atlantis Majoris, convalle Amsmiz! circ. 1300 m.

Pulchra species a *C. flavispina*, Boiss. (sub *Cirsio*), foliis et involucro satis superque distincta, et insuper spinis multo longioribus validioribusque. Proximus erit, ni fallor, species Abyssinica nondum descripta (?), "Coll. Schimper No. 51," quæ præter cæteras notas differt involucri foliolis cartilagineis, margine latiuscule scariosis denticulatis.

C. CHRYSACANTHUS (*Ball in Journ. Bot.* 1873, 369).

Caulis erectus, 3-pedalis et ultra; folia inferiora pinnatifida, segmentis dentato-lobatis, superiora angulato-dentata, suprema bracteiformia, omnia ex pube fusca araneosa obscure virentia, spinis aureis superne sensim crescentibus armata; spinæ bractearum capitula involucrantium ultra pollicem longæ; involucri foliola irregulariter imbricata, subæqualia, exteriora mucrone longo rigido munita, interiora colorata mucrone brevi aureo apiculata; achenia (nimis immatura)?

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan! a 1700 m. ad 1900 m.

Ex spinis aureis *C. ornato* nostro subsimilis, sed involucro foliisque omnino diversus. Propior est *Cnicus polyacantha*, Hochst. (sub *Cirsio*), species Abyssinica, qui differt (cæteris neglectis) involucri foliolis utrinque dentes 2–4 spinosos gerentibus.

Flora montana Abyssinica Maroccanæ nullomodo arcte affinis est. Mirum igitur quod inter *Carduineas* tres species novæ a nobis detectæ omnes proxime ad typos Abyssinicos accedunt!

C. SYRIACUS (*L.*, sub *Carduo*; *Willd. Sp. Pl.* iii. 1683), = Notobasis syriaca (*Cass. Dict.* xxv. 225; *DC. Pr.* vi. 660).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. merid.—Prov. Mtouga!

Ar. Geog. Regio Mediterranea calidior (inclusa Macaronesia). Deest in Gallia australi et in Italia superiore.

De genere *Notobasi* confer Benth. et Hook. Gen. Pl. ii. 469.

CNICUS CASABONÆ (*L.*, sub *Carduo*; *Willd. Sp. Pl.* iii. 1682),= Chamæpeuce Casabonæ (*DC. Pr.* vi. 658).

Mar. merid.—Legi nondum florentem in convalle Aït Mesan supra Arround alt. circ. 2200 m.! et vidi spec. in Herb. Kew. fere eodem loco a cll. Rein et Fritsch lectum! Demum spec. ex Atlante Majore ab indigeno Ibrahim lectum vidi in Herb. Kew. a cel. Cosson receptum!

Ar. Geog. Hucusque tantum in insulis Italicis (Sardinia, Corsica, Ilva) et in *Stæchadibus* detectus.

Spec. meum habui pro *C. hispanico* (Lam., sub *Carduo*) donec spec. florentia citata vidi. Re vera folia in utraque planta non distinguenda. In stirpe nostra capitula in paniculam contractam subthyrsoideam disposita sunt; in *C. hispanico* capitula pauca corymbosa. An pro subspecie habenda?

ONOPORDON (*L. Gen.* 927).

O. ILLYRICUM (*L., Boiss. Fl. Or.* iii. 560; *Willk. et Lge., Fl. Hisp.* ii. 178),=O. elongatum (*Lam. Fl. Fr.* ii. 6; *DC. Pr.* vi. 618).

Mar. merid.—In ruderatis urbis Marocco! Prov. Mzouda!

Ar. Geog. Europa australis a Lusitania ad Bosphorum. Asia Minor. Syria. Mesopotamia. Ex Africa boreali, nostris exceptis, spec. nulla vidi.

O. MACRACANTHUM (*Schousb. Gew. Mar.* 184, tab. 5 et 6; *DC. Pr.* vi. 618).

Mar. sept.—Legi prope Tetuan (1851)!

Mar. occid.—Casa Blanca! Prope Mogador! In prov. Haha haud procul Mogador!

Ar. Geog. Species floræ Maroccanæ et Hispaniæ propria, nec alibi detecta.

Folia in spec. nostris bicoloria, superne glabrescentia viridia, in pagina inferiore albo-lanata, inferiora pinnatifida; involucri foliola exteriora tomentosa vix spinosa, media in spinas longas, subulatas, vix canaliculatas, patentes reflexasve, abrupte desinentia.

O. SIBTHORPIANUM (*Boiss. et Held. in Fl. Or.* iii. 561),=O. macracanthum (*Fl. Gr.* tab. 832, *non Schousb.*), var. VIRIDE, *nob.*

Foliis in pagina superiore glabris viridibus.

Mar. occid.—Mazagan! et forsan huc frustulum incompletum prope Mogador lectum!

Ar. Geog. Species in Oriente latiuscule diffusa, cujus var. in Algeria interiore nascitur. Varietas nostra in litore Atlantico Imp. Maroccani.

Nostræ plantæ valde proximum est "*O. ambiguum*," Balansa, Pl. d'Algérie, No. 794; sed hoc (monente cel. Boissier) ad *O. Sibthorpianum* referendum est.

Ab *O. macracantho* videtur toto cœlo diversa planta a nobis ad Mazagan lecta, gaudet spinis involucralibus dimidio brevioribus, squamis sensim nec abrupte acuminatis. Attamen hæ notæ videntur variabiles, et plurimæ species hujus generis incertæ mihi manent.

CYNARA (*L. Gen.* 928).

C. CARDUNCULUS (*L.*, *DC. Pr.* vi. 620).

Mar. occid.—In parte superiore montis Djebel Hadid haud procul Mogador, loco a cultura remoto!

Nisi fallor, vidimus nondum florentem in regione inferiore Atlantis Majoris.

Ar. Geog. Per regionem fere omnem Mediterraneam (inclusa Macaronesia) dispersa sed sæpe introducta. Planta spontanea ubique rara.

C. HYSTRIX (*Ball in Journ. Bot.* 1873, 369).

Caulis erectus, gracilis, foliosus, 3-pedalis et ultra; folia inferiora longissima, pinnata, pinnis pinnatifidis laciniatis, rachi inter pinnas dentibus linearibus acutis herbaceis apice spinosis munita, superiora sensim decrescentia, omnia, præsertim in auriculis semiamplexicaulibus profunde laciniatis, spinis tenuibus acutissimis armata, in pagina inferiore, cum caule tereti gracili, albo-tomentosa; involucri foliola exteriora angusta adpressa, media cartilaginea e basi lata in mucronem (etiam in præfloratione) patentem acuminata, interiora recta; achenia ignota.

Mar. merid.—Specimen unicum legi in collibus ditionis Reraya, haud procul Mulai Ibrahim!

Plantam nostram, etsi immaturam, inter *Cynaras* reponendam esse nihil dubito. A cæteris mihi cognitis omnino diversa est. Foliorum et pinnarum lacinia suprema integra linearis, insigniter elongata.

C. HUMILIS (*L.*, *DC. Pr.* vi. 620), = Bourgæa humilis (*Coss. Pl. Crit.* 39).

Mar. sept.—Valde frequens in ditione Tingitana, ubi eam jam legerant Webb, Salzmann, cæterique botanici! Legi prope Tetuan (1851)!

Mar. occid.—Vidimus in monte Djebel Hadid haud procul Mogador!

Mar. merid.—Occurrit hinc inde in regione inferiore, sed non ubique. Mesfioua! Specimen prope Ourika lectum in Herb. Kew. (*R. et Fr.*)!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

SILYBUM (*Gærtn. Fruct.* ii. 378).

S. MARIANUM (*L.*, sub *Carduo*; *Gærtn. l. c.*; *DC. Pr.* vi. 616).

Mar. sept.—Prope Tanger et Tetuan pluries visum!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Europa media et occidentali, verisimiliter introductum.

GALACTITES (*Mœnch, Meth.* 558).

G. TOMENTOSA (*Mœnch, l. c.*; *DC. Pr.* vi. 616),=Centaurea Galactites, *L.*

Mar. sept.—Tanger!

Ar. Geog. In Europa Mediterranea fere omni late dispersa. Africa borealis. Macaronesia.

STÆHELINA (*L. Gen.* 938).

S. DUBIA (*L.*, *DC. Pr.* vi. 544).

Mar. sept.—In rupibus juxta Tetuan (1851)!

—— ——, var. capitulis (saltem virgineis) basi foliis cinctis. An forma inter *S. dubiam* et *S. bæticam*, DC., media?

Mar. merid.—Legimus mox floribundam in convalle Amsmiz, 1500–1700 m.!

Ar. Geog. *S. dubia*, per Europam austro-occidentalem a Dalmatia usque Lusitaniam dispersa, deest in Algeria et in Macaronesia.

CRUPINA (*Cass. Dict.* xii. 67).

C. VULGARIS (*Cass. Dict.* xliv. 39; *DC. Pr.* vi. 565),=Centaurea crupina (*L.*, *Desf. Fl. Atl.* ii. 292).

Mar. merid.—Prope Seksaoua!

Ar. Geog. Species per Europam australem et Orientem dispersa, et inde per regionem Danubialem et Rossiam australem usque Soongariam. Ex Africa, præter spec. nostra, nunquam vidi.

VOLUTARELLA (*Cass. Bull. Philomath.* 1816; *Benth. et H. f. Gen. Pl.* ii. 476).

V. LIPPII (*L.*, sub *Centaurea*; *Cass. Dict.* xliv. 39),= Amberboa Lippii (*DC. Pr.* vi. 559, *et auct. plur.*).

Mar. occid.—Prov. Haha haud procul Mogador! Aïn el Hadjar!

Mar. merid.—Shedma! In planitie et in rupibus arenaceis haud procul urbe Marocco!

Ar. Geog. Per regionem Mediterraneam calidiorem ex Arabia Petræa usque Macaronesiam diffusa. In Europa nonnisi in Hispania austro-orientali.

V. CRUPINOIDES (*Desf. Fl. Atl.* ii. 293, sub *Centaurea*; *DC. Pr.* vi. 559, sub *Amberboa*),=Volutarella bicolor (*Cass. Dict.* l. 250),=Lacellia libyca (*Viv. Fl. Lib.* 58, tab. 22).

Mar. occid.—Frustulum hujus speciei ex monte Djebel Hadid haud procul Mogador attulerunt Rein et Fritsch!

Mar. merid.—Legimus in rupibus supra Seksaoua ad radices Atlantis Majoris! Spec. ex Oasi Akka ab indigeno Mardochæo lectum benev. comm. cel. Cosson!

Ar. Geog. Africa borealis a Mari Rubro usque litora Oceani. Arabia. Palæstina.

Pace celebb. Benth. et H. fil. hæc mihi videtur a priore probe distincta species. Video folia glabra *Crupinæ vulgaris*, involucri subglaberrimi (basi interdum araneoso-tomentosi) squamas lineis fuscis notatas, apice nigrescentes, sensim acutas, nec abrupte acuminatas cuspidato-mucronatas. Corollæ disci croceæ sunt, marginales læte purpureæ. Achenium, in utraque specie hilo laterali præditum, in *V. Lippii* villosum tenuiter rugosum vix foveolatum, in *V. crupinoide* minus villosum, inter costas insigniter foveolatum.

VOLUTARELLA LEUCANTHA (*Coss. Ind. Pl. Maroc.* 21, sub *Amberboa*).

Mar. merid.—? Ex provincia Mtouga, spec. incompletum in Herb. Kew. asservatum attulerunt cll. Rein et Fritsch!

Species mihi parum cognita a cel. auctore nondum descripta. Monente cel. Cosson nascitur in Imp. Maroccano Transatlantico, in Oasi Akka, ubi eam legit indigenus Mardochæus.

V. MURICATA (*L.*, sub *Centaurea*; *DC. Pr.* vi. 559, sub *Amberboa*),= Cyanopsis radiatissima (*Cass. Dict.* xliv. 39).

Mar. merid.—Mesfioua! Prov. Mtouga ad fines prov. Shedma!

Ar. Geog. Hispania australis. Marocco meridionalis.

LEUZEA (*DC. Fl. Fr.* iv. 109).

L. CONIFERA (*L.*, sub *Centaurea*; *DC. l. c.*, *Prod.* vi. 665.).

Mar. sept.—In saxosis prope Tetuan (1851 et iterum 1871)! In monte Djebel Dersa prope Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

CENTAUREA (*L. Gen.* 984; *Benth. et H. fil. Gen. Pl.* ii. 478).

C. TAGANA (*Brot. Fl. Lus.* i. 369, et *Phyt. Lus.* tab. 32; *DC. Pr.* vi. 566).

Mar. sept.—In monte Djebel Kebir et alibi in collibus prope Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schousb. Herb.*)!

Ar. Geog. Lusitania. Hispania australis. Sicilia (unde mihi spec. comm. cl. Todaro) Ager Tingitanus.

Hæc mihi videtur mera var. *C. africanæ* (Lam. Dict. i. 664), quæ vix differt nisi foliis inferioribus bipinnatifidis. In pl. nostra folia simplicia margine crenulato-serrata, vel basi grosse dentata, vel inferiora pinnatifida.

C. CHAMÆRHAPONTICUM, *nob.*,=Cynara acaulis (*L.*, *Desf. Fl. Atl.* ii. 249, tab. 223),=C. humilis (*Juss. Gen.* 173, *non L.*),=Rhaponticum acaule (*DC. Pr.* vi. 664),=Serratula acaulis (*DC. Diss. Comp.* 31), =Cestrinus carthamoides (*Cass. Dict.* viii. 24).

Mar. occid.—? Folia radicalia fere certe huc referenda prope Agadir ab indigenis lecta anno 1871!

Mar. merid.—Occurrit haud raro in saxosis aridissimis planitiei Maroccanæ. Prov. Shedma plurimis locis! Prope Seksaoua!

Ar. Geog. Africa borealis ad fines reg. desertæ. Nascitur etiam in insula Cypro fide Sibthorp (Prod. Fl. Gr. ii. 158); sed a recentioribus non visa, nec enumeratur in Boiss. 'Fl. Orientali.'

Vidimus tantum sp. deflorata et subexsiccata. Floret verisimiliter hieme vel ineunte vere.

CENTAUREA COSSONIANA (*Ball in Journ. Bot.* 1873, 369),=Rhaponticum caulescens (*Coss. in Bull. Soc. Bot. Fr.* xx. 251).

Descriptionem Cossonianam proferre licet:

"Planta *perennis*, forma foliorum *Rhaponticum acaule* exacte referens. Caudex crassus in radicem fusiformem abiens, superne basi petiolorum emarcidorum squamæformium stipatus. *Caules* 1 vel 3–4, *folia plus minus superantes vel brevissimi*, simplices, erecti, teretes, striati, pube arachnoidea detersibili donati, demum glabriusculi, folia 1–2 gerentes. *Folia* supra pubescenti-floccosa, subtus cano-tomentosa; *radicalia* sæpius plurima, petiolata, *pinnatisecta segmentis* ambitu oblongo- vel ovato-cuneatis *inciso-pinnatifidis in rachim alato-foliaceum* hinc inde dentatam *decurrentibus*; caulina 1–2, inferius segmentis sæpe integris, superius ad petiolum squamæformem reductum. Capitula magna, apice caulium solitaria, foliis floralibus haud involucrata. *Involucrum ovato-campanulatum, foliolis* pluriseriatis arcte imbricatis, chartaceis, dorso superne subherbaceo striatis, *apice in appendicem scariosam ovatam vel oblongo-lanceolatam irregulariter laceram* tenuissime ciliatam *dilatatis*, inferioribus multo minoribus lanceolatis dorso pubescenti-floccosis, mediis oblongo-lanceolatis, interioribus lanceolato-linearibus. Receptaculum piliferum pilis achæniis longioribus. *Flosculi omnes hermaphroditi, æquales*, pallide purpurascentes? tubo longissimo, limbo ultra medium 5-fido laciniis angustis linearibus. *Filamenta papillosa. Antheræ basi sagittatæ*, auriculis contiguis connatis, caudis integris vel vix laceris, appendice terminali oblonga obtusa. Styli rami erecti, connati imo, apice obtusiusculo tantum liberi. *Achænia glabra, areola insertionis obliqua*, oblonga, *compressa*, obsolete pluristriata, superne paullulum contracta margine prominulo brevissimo annulæformi denticulato coronata. *Pappi albi*, tubum flosculorum superantis *setæ* pluriseriatæ, *valide scabræ, fere barbellatæ*, sensim longiores, exteriores multo breviores, *interiores* longiores *conformes*."

Mar. occid.—Monente cel. Cosson hæc planta nuper a mulione Ibrahim in monte Djebel Hadid, haud procul Mogador, lecta fuit.

Mar. merid.—Primus hanc stirpem legit Balansa in monte Djebel Orguis prope Imintenout. Legimus formam subacaulem in saxosis prope

Seksaoua! et formam caulescentem in monte supra Seksaoua ad 1600 m.!

Stirps insignis, quam nomine amicissimi Cosson, floræ Africæ borealis magistri, decorare proposui, fere eodem tempore quo sub *Rhapontico caulescente,* Coss. *l. c.,* publici juris facta est. Quoad citatum "Coss. et Bal. in Balansa, Pl. Maroc. (1867)," hoc certe non valet, dum in itinere suo cl. Balansa perpauca specimina legere potuit, et planta nostra in omnibus fere herbariis deest. Affinitatem proximam hujus cum *Rhapontico acauli* (quod ducibus Benth. et H. fil. inter *Centaureas* enumeravi) nemo negabit, sed in hoc involucri structura valde diversa. In sp. nostra foliola involucri in seriebus 8-10 æquidistantibus regulariter imbricata, exteriora lanceolata acuta margine chartacea exappendiculata, interiora appendice scarioso-fimbriata munita.

Achenia matura prismatica 5-costata, costis intermediis quinque subobsoletis. Pappi setæ demum purpurascentes scabræ, interiores plumosæ, plumulis deciduis.

Qui nobiscum animo haud æquo genus *Rhaponticum,* Lam., ad sectionem *Centaureæ* reductum a Bentham et Hooker (in Gen. Plant. ii. p. 479) observaverit, hanc speciem (a *Rhaponticis* nullo pacto divellendam) ad sententiam virorum illust. confirmandam agnoscere debet. Charactere technico est enim *Fornicio,* Cass., vel *Chartolepide,* DC., propior quam *Rhapontico,* a quo involucro et pappi setis interioribus plumosis longe distat, etiamsi facie simillima.

Centaurea Clementei (*Boiss. ap. DC. Pr.* vii. 303, et *Voy. Esp.* 346, tab. 102).

Mar. sept.—Prope Tetuan in monte Beni Hosmar, ubi jam legerat P. B. Webb!

Ar. Geog. In Hispaniæ australis montibus Sierra de Yunquera et in montibus Tetuanensibus.

Pulchra species a proxima *C. Ragusina,* L., satis superque distincta.

C. pullata (*L., DC. Pr.* vi. 577).

Mar. sept.—Tanger! (*Webb Herb.*)! Cap. Spartel! Inter Tanger et Tetuan! Prope Tetuan (1851)! Inter Tetuan et Ceuta!

Mar. occid.—Casa Blanca!

Mar. merid.—Milhaïn! Taradut (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia).

—— ——, var. minor. Planta omnibus partibus minor, flosculis radiantibus et appendicibus foliolorum involucri brevioribus.

Mar. merid.—In saxosis apricis regionis inferioris haud infrequens. Prov. Shedma pluribus locis! Mzouda! Seksaoua!

C. incana (*Desf. Fl. Atl.* ii. 301, *non Ten. nec Lag.*), = C. pubescens (*Willd. Sp. Pl.* iii. 2322; *DC. Pr.* vi. 589).

Mar. merid.—Legimus nondum florentem in convalle Aït Mesan ad 1800 m. s. m.! et prope Seksaoua!

—— ——, var. HOOKERIANA (*Ball in Journ. Bot.* 1873, 370).

Primo intuitu a *C. incana* differt capitulis multo majoribus, flosculis aurantiaco-purpureis, involucri foliolorum spina media longiore, demum recurvata, utrinque spinulosa. Habui pro specie nova, donec specimina permulta hujus gregis diligenter explorata notas specificas hucusque indicatas fallaces esse me docuerunt.

Mar. merid.—In planitie Maroccana ad fines prov. Mtouga et Shedma!

Ar. Geog. *C. incana*, Desf., est species Africæ borealis propria; species proxime affines per Orientem et Hispaniam diffusæ sunt.

Nomen *C. incana*, Desf., a Willdenovio ipso sub *C. pubescente* sua citatum, nescio quo pacto a recentioribus prætermissum, hic restitui.

Notæ differentiales quibus hæc et plurimæ species affines a *C. reflexa*, Lam., separantur mihi videntur nimis variabiles; et sicut subspecies, sensu nostro, enumerandæ sunt *C. ornata*, W., *C. saxicola*, Lag., *C. omphalotricha*, Coss. et Dur., et *C. psilacantha*, Boiss. et Held. His forsan addenda est *C. persica*, Boiss. Hujus gregis varietas nostra regina est. Statura robusta 2–4-pedalis; capitula magna colore ab aurantiaco ad atropurpureum variantia; achenia basi copiose sericeo-pilosa; pappus ut in *C. incana* typica longitudine mediocris, demum fuscus.

CENTAUREA CALCITRAPA (*L., DC. Pr.* vi. 597).

Mar. merid.—Prov. Shedma! Prope Amsmiz!

Ar. Geog. Europa media. Regio Mediterranea fere omnis (inclusa Macaronesia). In ditione nostra videtur rara, et in agro Tingitano a botanicis plurimis perlustrata nondum detecta est.

C. MELITENSIS (*L., DC. Pr.* vi. 593),=C. Apula (*Lam. Dict.* i. 674; *DC. Pr. l. c.*).

Mar. sept. Prope Tetuan (1861)!

Mar. merid.—Mesfioua! Mzouda!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). Deest in Asia Mediterranea continentali et in Ægypto. Hæc species obvia est in Africa australi, in America australi extratropica (Chili, Bonaria, Monte Video, Brasilia), in California (*Douglas*), et in Insula Paschali (*Chamisso*). Dicitur introducta; plantam tamen in Europa nullibi frequentem vix in tantis regionibus longinquis hominum opere allatam esse crediderim.

C. ERIOPHORA (*L., DC. Pr.* vi. 592).

Mar. occid.—Casa Blanca! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Prov. Shedma!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

CENTAUREA SULPHUREA (*Willd. Enum.* No. 391; *DC. Pr.* vi. 593, *non Lag.*).

Mar. merid.—Occurrit satis frequens ad radices Atlantis Majoris. Tasseremout! Mesfioua! Reraya! Amsmiz! Seksaoua!

Ar. Geog. Hispania. Africa borealis.

C. MAROCCANA (*Ball in Journ. Bot.* 1873, 370).

Planta humilis, dichotome ramosa; folia radicalia (et interdum caulina inferiora) pinnatifida, lobis angulato-dentatis; caulina lanceolato- vel lineari-oblonga, integra acute denticulata; longe decurrentia; capitula terminalia inter folia suprema fulcrata; inflorescentia impia (scil. rami seniores abbreviati a junioribus superati); involucri ovato-conici elongati foliola nitida, cartilaginea, 'spina valida utrinque spinulosa coronata; foliolorum mediorum spinæ elongatæ, internorum abbreviatæ; achenia matura epapposa.

Mar. merid.—Sat frequens in regione arida subdeserta inter Mogador et urbem Marocco. Legimus pluribus locis in prov. Shedma, necnon ad radices Atlantis juxta Milhaïn!

Species fere media inter *C. eriophoram*, L., et *C. sulphuream*, W., ab utraque mihi videtur sat diversa; structura priori, facie tamen *C. sulphureæ* propior. A *C. eriophora* differt statura multo minore, capitulis minoribus dimidio angustioribus nitidis, nec basi araneoso-pubescentibus, spinis foliolorum involucri validioribus. *C. sulphurea* gaudet foliolis involucri omnino diversis, appendice spinis radiantibus coronata, spina media fusca quam cæteræ paulo longiore (fere ut in § *Seridia*), dum in *C. maroccana* spina media valida est potius subpinnatim spinulosa, spinulis utrinque sparsim dispositis. A *C. sicula*, L., structura et habitu longius distat. Nostra species est affinibus præcocior; achenia jam matura vidimus dum *C. sulphurea* nondum florebat.

C. SERIDIS (*L.*, *DC. Pr.* vi. 599), var. AURICULATA, = C. auriculata (*Balb. in Pers. Syn.* ii. 91).

Mar. occid.—In maritimis juxta Mazagan!

Ar. Geog. Hispania. Sardinia. Africa boreali-occidentalis.

Spec. nostra cum Sardois a cl. Mueller lectis bene conveniunt et inter *C. seridis* et *C. sonchifolia* ambigua sunt. Revera *C. sonchifolia* videtur esse tantum subspecies *C. seridis*. Forma vegetior foliis caulinis longe decurrentibus est *C. maritima* (L. Duf.; DC. Pr. l. c.). *C. seridis* typica, si bene hanc novi, nascitur in arenosis juxta S. Roque pr. Promont. Calpes.

C. POLYACANTHA (*Willd. Sp. Pl.* iii. 2312; *DC. Pr.* vi. 600).

Mar. sept.—In monte Djebel Kebir juxta Tanger! (*Salzm. Exsicc.*, sub *C. sphærocephala*)! Cap. Spartel! Inter Tanger et Tetuan (*Webb Herb.*)!

Ar. Geog. Species propria ditionis Tingitanæ et Hispaniæ australis juxta Fretum Herculis.

CENTAUREA ASPERA (*L., DC. Pr.* vi. 599).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In prov. Shedma, ut videtur, infrequens! Nuper habui a cel. Cosson spec. ab indigeno Mardochæo inter Mogador et Ilhir lectum!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

C. FRAGILIS (*Durieu in Rev. Bot.* ii. 429; *Walp. Ann.* i. 450).

Mar. sept.—Tanger (*Spec. ex Herb. Schousb.*, sub *C. sphærocephala*)! Cap. Spartel! In rupibus juxta Tetuan 1851 et 1871! In monte Djebel Dersa pr. Tetuan (*Webb Herb.*)!

—— ——, var. INTEGRIFOLIA, *nob.* Differt foliis etiam inferioribus subintegerrimis, caulinis obverse lanceolatis integerrimis basi semi-amplexicaulibus, supremis linearibus, ramis eximie angulatis subalatis. Valde similia sunt spec. a Balansa prope Aïn el Turk lecta.

Mar. occid.—Prope Mogador! In collinis prov. Haha haud procul Mogador!

Ar. Geog. Africa boreali-occidentalis.

C. DILUTA (*Ait. Hort. Kew.* iii. 261; *DC. Pr.* vi. 591),=C. elongata (*Schousb. Gew. Marok*, p. 186, *ex Willd. Sp. Pl.* iii. 2300),=C. raphanifolia (*Salzm. Exsicc.* 1825). Verisimiliter eadem est *C. elata* (Poir. Dict. Suppl. ii. 150).

Mar. sept.—Legi florentem pr. Tanger 13 Jun.! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (1851)!

Ar. Geog. Species propria ditionis Tingitanæ.

C. SALMANTICA (*L., Desf. Fl. Atl.* ii. 303; *Benth. et H. fil. Gen. Pl.* ii. 482),=Microlonchus salmanticus (*DC. Pr.* vi. 563),=Mantisalca elegans (*Cass. Dict.* xxix. p. 31).

Planta polymorpha in species plurimas notis diagnosticis instabilibus definitas a recentioribus dilaniata. Characteres a pappo desumpti certe fallaces. Interdum achenia omnia papposa sunt, interdum exteriora calva; et hoc vidit etiam beatus J. Gay in spec. Gallicis *M. Duriæi*, Spach. Ex ditione nostra video varietates duas non semper facile distinguendas.

—— ——, var. *a.* CLUSII,=Microlonchus Clusii (*Spach in Ann. Sc. Nat.* 3me ser. iv. 167; *Willk. et Lge. Fl. Hisp.* ii. 167).

Distinguitur capitulis majoribus, basin versus dilatatis, foliolis involucri apicem versus leviter pubescentibus mucrone brevi cito deciduo armatis.

Mar. sept.—Tetuan (1851)! (*Herb. Webb*)!

Mar. occid.—Casa Blanca!

Ar. Geog. Per regionem omnem Mediterraneam late dispersa. Fit rara in Oriente, adest in Madera sed in ins. Canariensibus nondum detecta.

—— ——, Var β. LEPTOLONCHUS, = Microlonchus leptolonchus (*Spach, l. c.*).

Planta gracilior gaudet capitulis angustioribus, foliolis involucri glaberrimis, mucrone subpersistente.

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Satis frequens in regione inferiore et ad radices Atlantis Majoris. Shedma! Sheshaoua! Prope urbem Marocco! Mesfioua! Aït Mesan! Amsmiz! Seksaoua!

Ar. Geog. Hæc forma, quoad sciam, nonnisi in Africa boreali obvia est.

CARTHAMUS (*L. Gen.* 931; *Benth. et H. fil. Gen. Pl.* ii. 483).

C. LANATUS (*L., Boiss. Fl. Or.* iii. 706), = Kentrophyllum lanatum (*DC. Bot. Gall.* i. 293, *et Prod.* vi. 610), var. ELEGANS, *nob.* Folia omnia indivisa semiamplexicaulia, subtus eximie nervosa, nervis lateralibus intermediis usque ad apicem, exterioribus ultra mediam folii longitudinem, productis; involucri foliola exteriora foliacea ciliato-spinosa subpatentia, interioribus æquilonga nec longiora, intima angusta chartacea nervosa apicem versus ciliato-spinosa. Achenia immatura.

Mar. merid.—Spec. unicum prope Seksaoua legit J. D. H.! alterum legi in prov. Mtouga! et eandem plantam in prov. Mtouga legerunt Rein et Fritsch!

Pluribus notis planta nostra cum *Kentrophyllo bæetico* (Boiss. et Reut. Pug. 65) convenit, et forsan melius observata pro sp. distincta habenda erit.

Ar. Geog. Regio Mediterranea omnis (excl. Ins. Canariensibus). Occurrit etiam in calidioribus Europæ mediæ et orientalis.

C. CÆRULEUS (*L., Boiss. Fl. Or.* iii. 710; *DC. Pr.* vi. 615, sub *Carduncello*), var. TINGITANUS, = C. tingitanus (*L., Desf. Fl. Atl.* ii. 256).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. merid.—In convalle Aït Mesan a 1700 m. usque 2200 m.!

Ar. Geog. C. cæruleus per regionem omnem Mediterraneam (inclusa Macaronesia) dispersus est. Var. nostra, quæ differt tantum foliis pinnatifidis, fere ubique cum specie obvia.

CARDUNCELLUS (*Adans. Fam. Pl.* ii. 116).

C. PINNATUS (*Desf. Fl. Atl.* ii. 258, tab. 229, sub *Carthamo*; *DC. Pr.* vi. 614), = Onobroma pinnatum (*Spreng. Syst.* iii. 319).

Mar. sept.—Inter Tanger et Tetuan! (*Webb Herb.*)!

Ar. Geog. Africa borealis. Sicilia.

C. lucens (*Ball in Journ. Bot.* 1873, 370).

Acaulis; folia primaria integra ciliato-spinosa, sequentia pinnatipartita, lobis eximie pectinato-spinosis; involucri foliolorum appendix late scarioso-pectinata, intimorum anguste marginata; achenia (immatura) videntur lævia.

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan! a 2000 m. ad 2540 m.

Vivus a *C. pinnato* statim dignoscitur spinis longioribus albis lucentibus. Foliola involucri gaudent appendicibus longius pectinatis, et achenia videntur diversa. Melius cognitus pro specie omnino diversa facile accipiendus.

Nuper habui a cel. Cosson specimina in monte Djebel Ouensa ab indigeno Ibrahim lecta sub "*C. pinnatus*, Desf.," quæ certe ad subspeciem nostram spectant et appendicibus pectinatis gaudent.

SCOLYMUS (*L. Gen.* 922).

S. MACULATUS (*L.*, *DC. Pr.* vii. 75).

Mar. sept.—Tanger! (*Webb Herb.*)!

Mar. merid.—In via qua itur a Shedma ad Mogador (*G. Maw sp.*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Nubia etiam obvia.

S. HISPANICUS (*L.*, *DC. Pr.* vii. 76).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*).

Mar. merid.—Sat frequens in regione inferiore prov. Shedma! Prov. Mtouga! Ain Tarsil! Keira!

Ar. Geog. Regio Mediterranea fere omnis. In ins. Teneriffa obvia, deest in Madera.

CATANANCHE (*L. Gen.* 920).

C. CÆRULEA (*L.*, *DC. Pr.* vii. 83).

Mar. merid.—Frequentissime occurrit ad radices et in convallibus calidioribus Atlantis Majoris. Aït Mesan! Reraya! Sektana! Mtouga (*R. et Fr. spec.*)!

Statura et foliorum forma valde ludibunda; folia fiunt integra, vel sinuato-dentata, vel grosse repando-dentata subpinnatifida.

—— ——, var. TENUIS. Differt statura minore, indumento argenteo-sericeo, foliis angustis linearibus integris, vel hinc inde lobis linearibus inæqualibus instructis.

Mar. merid.—In convalle Aït Mesan a 1500 m. ad 1700 m.! Supra Amsmiz! In rupibus supra Seksaoua!

Ar. Geog. *C. cærulea* per regionem Mediterraneam occidentalem (exclusa Macaronesia) dispersa est. Ex Galloprovincia usque in montosis Delphinatus se protendit.

C. CÆSPITOSUM (*Desf. Fl. Atl.* ii. 238, tab. 217; *DC. Pr.* vii. 83).

Mar. merid.—In monte Djebel Tezah a 2200 m. usque 2800 m.!

Ar. Geog. Africa borealis.

Ludit foliis obverse lanceolatis subintegerrimis, vel apicem versus cuneato-dilatatis 3–5-fidis, lobis acute dentatis.

CATANANCHE LUTEA (*L., DC. Pr.* vii. 83),=Piptocephalum phaiolepis (*Sch. Bip. in Bonplandia,* 1860, 359).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Specimen a Broussonnet in Herb. Kew.*)! Nos non vidimus.

Ar. Geog. Regio Mediterranea calidior ex Syria usque Hispaniam australem. Deest in Gallia, in Italia media et superiore, in Dalmatia, necnon in Macaronesia.

Cel. Schulz Bip. formam occidentalem, capitulis majoribus insignem, ab orientali (*P. luteum,* Sch. Bip.) distinxit, et invita natura ex his genus novum condidit.

C. MONTANA (*Coss. et Dur. in Bal. Pl. d'Algérie*)?

Mar. sept.—In monte Djebel Dersa prope Tetuan beatus P. B. Webb spec. legit quæ verisimiliter huc referenda sunt. *C. montana,* a cll. auctoribus nondum descripta, verisimiliter in ditione nostra alibi occurrit.

Ar. Geog. Africa boreali-occidentalis.

CICHORIUM (*L. Gen.* 921).

C. INTYBUS (*L., DC. Pr.* vii. 84).

Mar. merid.—Seksaoua!

Ar. Geog. Europa omnis (exclusa arctica). Sibiria. In regione Mediterranea occidentali minus frequens, et deest in Macaronesia.

Specimen nostrum incompletum et haud omnino certum.

C. pumilum (*Jacq. Obs.* iv. 3, tab. 80; *Fl. Gr.* tab. 822; *DC. Pr.* vii. 84),=C. divaricatum (*Schousb. Gew. Marok,* 184; *Boiss. Fl. Or.* iii. 716),=C. Intybus, var. β. divaricatum (*DC. Pr.* vii. 84).

Mar. sept.—Prope Tetuan ad ostium fluminis (1851)!

Mar. merid.—Pluries visum, legimus in prov. Shedma! Spec. ad Aït Ibrahim lectum ab indigeno Mardochæo benev. comm. cel. Cosson!

Monente cel. Boissier stirps orientalis *C. pumilum* a *C. divaricato* occidentali non differt, et nomen antiquius prioritate gaudet. Hoc mihi videtur prioris subspecies facta annua vel interdum biennis.

Ar. Geog. Regio Mediterranea fere omnis, in Græcia et Dalmatia non indicatum. In Madera obvium, deest in Ins. Canariensibus.

HYOSERIS (*L. Gen.* 916, pro parte).

H. RADIATA (*L., DC. Pr.* vii. 79).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (1851)! Inter Tanger et Tetuan!

Mar. merid.—Satis frequens ad radices Atlantis Majoris. Seksaoua! Milhaïn! et alibi pluries visa!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

TOLPIS (*Adans. Fam. Pl.* ii. 112).

T. BARBATA (*Gærtn. Fruct.* ii. 372, tab. 160; *DC. Pr.* vii. 86).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*).

Mar. sept.—In collibus prov. Haha!

—— ——, var. GRANDIFLORA, *nob.* Planta humilis, foliis quam in typo duplo latioribus exciso-dentatis, capitulis magnis, flosculis centralibus purpureis.

Mar. sept.—Cap. Spartel! Vidi hanc var. in altero litore Freti Herculis haud procul Algeciras.

Ar. Geog. T. barbata Hispaniæ et Africæ borealis civis est. In Macaronesia deest.

T. UMBELLATA (*Bert. Am. Ital.* 96; *DC. Pr.* vii. 86).

Mar. occid.—Mogador (*Lowe sp. in Herb. Kew.*, sub *T. crinita*)!

Mar. merid.—Haud infrequens in regione inferiore et in convallibus calidioribus Atlantis Majoris. Prov. Shedma! Aïn Oumast! Mesfioua! Ourika! Aït Mesan! Sektana! Seksaoua!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Stirps valde ludibunda sæpius gaudet caule unico umbellatim ramoso. Forma a basi ramosa simillima est *T. barbatæ*; ab hac differt foliis basin versus profunde dentatis subpinnatifidis et acheniis quadrisetosis. In *T. barbata* achenia (an semper?) bisetosa.

RHAGADIOLUS (*Juss. Gen.* 168; *Benth. et H. fil. Gen. Pl.* ii. 510).

R. STELLATUS (*L.*, sub *Lapsana*; *Willd. Sp. Pl.* iii. 1625; *DC. Pr.* vii. 77).

Mar. merid.—Videtur satis frequens in regione inferiore et in convallibus Atlantis Majoris. Misra Ben Kara! Tasseremout! Aït Mesan ad 1300 m. s. m. In convalle Amsmiz circ. 1400 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

R. HEDYPNOIS (*Coll. Fl. Ped.* No. 831; *Benth. et H. fil.* ii. 510). Inclusis *Hedypnoide cretica* (DC. *l. c.* Pr. vii. 81), *H. coronopifolia* (DC. *l. c.*), et *H. polymorpha* (DC. *l. c.*).

Mar. sept.—Tanger! Inter Tetuan et Ceuta!

Mar. occid.—Mogador! (*Lowe Cat.*).

Mar. merid.—Frequens in regione inferiore. Prov. Shedma! Prov. Mtouga! Mesfioua! et alibi obvius.

Stirps polymorpha, cujus formæ aspectu valde diversæ instabiles sunt. Synonyma auctorum permulta sed plurima incerta.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

R. pendulus (*Balb. in Pers. Syn.* iii. 369, sub *Hyoseride*; *DC. Pr.* vii. 82, sub *Hedypnoide*; *Benth. et H. fil. Gen. Pl.* ii. 510).

Mar. sept.—Tanger!

Mar. occid.—Casa Blanca! Circa Mogador frequentissime! In prov. Haha in reg. litorea! Aïn el Hadjar haud procul Mogador! (*Lowe spec. in Herb. Kew.* prope Mogador lectum sub *H. arenaria*)!

Ar. Geog. Verisimiliter per regionem Mediterraneam fere omnem (exclusa Macaronesia) occurrit.

Cel. Boissier hanc stirpem ad varietatem prioris reduxit (conf. Fl. Or. iii. 719); ego tamen pro subspecie habui, dum characteres stabiliores præbet et formæ intermediæ vix inveniendæ. Pedunculi elongati graciles, sub anthesi sæpius (non semper) penduli, fructiferi parum incrassati. Ligulæ sæpius saturate luteæ, interdum aurantiacæ.

RHAGADIOLUS ARENARIUS (*Schousb. Gew. Marok*, 183, sub *Hyoseride*; *DC. Pr.* vii. 82, sub *Hedypnoide*; *Benth. et H. fil. Gen. Pl.* ii. 510).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub "*Hyoseris arenaria*")!

Ar. Geog. Ditio Tingitana. Hispania australis in arenosis Gaditanis et alibi rarius in regione litorea.

Fertur in Lowe Cat. inter plantas Mogadorenses; sed species juxta Mogador perfrequens, et Schousboeo bene nota, ad *R. pendulum* certissime referenda est.

PICRIS (*L. Gen.* 909).

P. ALBIDA (*Ball in Journ. Bot.* 1873, 370).

Planta ramosa, decumbens; folia inferiora lyrato-pinnatifida, superiora angusta, basi semiamplexicaulia; pedunculi bracteati; capitula pro genere parva; involucri foliola exteriora dorso subindurata, interiora viridia pappum æquantia; ligulæ albidæ (exsiccatæ ochroleucæ), longiusculæ, exteriores dorso purpurascentes; achenia omnia pappo plumoso coronata, rostro longiusculo ipso achenio subæquali.

Mar. merid.—Hinc inde in planitie Maroccana. Prope Sheshaoua! Mzouda! Seksaoua! et alibi.

Ex acheniorum structura ad § *Eupicridem* adjungenda, facie potius ad § *Spitzeliam*, et præsertim ad sp. sequentem accedit. Nostra species proxima est *P. campylocarpæ*, Boiss., et *P. longirostræ*, Sch. Bip. Prior differt habitu erecto, foliis sinuato-dentatis, indumento minus rigido.

In *P. albida* indumentum in herba tota biforme, ex pube brevi et setis rigidis apice non glochidiatis.

P. PILOSA (*Del. Fl. Eg.* 116, tab. 141. fig. 2; *DC. Pr.* vii. 130), = Spitzelia ægyptiaca (*Sch. Bip. in Flora*, 1833, 727), = S. cupuligera (*Dur. in Rev. Botan.* ii. 431).

Mar. occid.—Juxta Aïn el Hadjar haud procul Mogador!

Mar. merid.—Frequens in regione inferiore et usque radices Atlantis Majoris. Prov. Haha! Shedma! Milhaïn! Seksaoua! Amsmiz! Mskala! in ruderatis et locis umbrosis urbis Marocco!

Ar. Geog. Africa borealis ex Ægypto usque oras Oceani.

Aspectu variabilis, sæpius subpedalis, hæc planta in irrigatis fit luxurians 2–3-pedalis; sed structura involucri et fructus satis constans. Ducibus celebb. Benth. et H. fil. (Gen. Pl. ii. 512) et Boissier (Fl. Or. iii. 734) *Spitzeliam*, Sch. Bip. loc. cit. pro sectione *Picridis* habui. *S. cupulifera* a *P. pilosa*, Del., nec involucro nec fructu nec habitu differre videtur. Huic proximæ sunt *P. radicata*, Forsk. (=*P. lyrata*, Del.), et *P. atlantica*, Coss. (sub *Spitzelia*), sed in his pappus acheniorum exteriorum longiuscule fimbriatus est.

HELMINTHIA (*Juss. Gen.* 170).

H. ECHIOIDES (*L.*, sub *Picride*; *Gærtn. Fruct.* ii. 398, tab. 169; *DC. Pr.* vii. 132).

Mar. sept.—Tanger!

Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).

Pace celebb. Bentham et Hooker fil., qui *Helminthiam* ad sectionem *Picridis* revocarunt, hoc mihi videtur genus omnino naturale, structura involucri propria bene definitum.

H. ACULEATA (*Vahl, Symb.* ii. 89, sub *Picride*; *DC. Pr.* vii. 132).

Mar. occid.—Legi prope Casa Blanca spec. unicum casu aliquo vel absconditum vel perditum!

Ar. Geog. Africa borealis. Sicilia.

CREPIS (*L. Gen.* 914).

C. TINGITANA (*Salzm. Exsicc.*, sub *Hieracio*).

Mar. sept.—In monte Djebel Kebir et alibi in umbrosis prope Tanger! (*Salzm. spec.*)! (*Webb Herb.*)!

Mar. occid.—Casa Blanca!

Ar. Geog. Marocco. Hispania Gaditana a me prope Algeciras, et a Bourgeæo pr. Alcala detecta, sec. Willk. et Lange.

Crepis spathulata (Guss. Pl. Cat. 1821; Spreng. Syst. iii. 651; et DC. Pr. vii. 153, sub *Barkhausia*) est planta aliena, quacum cel. DC. *l. c.* speciem nostram perperam conjunxit. Stirps Sicula habet folia caulina pauca lineari-lanceolata, exauriculata, et achenia brevissime rostrata, nostra invicem gaudet foliis caulinis plurimis oblongis vel subspathulatis, sæpius dentatis, semper ad basin auriculatis, et acheniis longiuscule rostratis.

Habui ex Sicilia spec. *C. hyemalis*, Biv., pl. nostræ subsimilia, sed in hac foliola exteriora involucri latiora et laxiora. In *C. tingitana* capitula sat magna, ligulæ saturate flavæ, caules paulo supra basin ramosi, 1–2-pedales. *C. macrophylla* (Desf. Fl. Atl. ii. 231; DC. Pr. vii. 155, sub *Barkhausia*), ex descript. Fontanesiana, sp. nostræ valde proxima, est mihi species incerta, cujus exemplaria nulla vidi, nec vidit celeb. DC.

C. TARAXACIFOLIA (*Thuill. Fl. Par.* i. 409; *DC. Pr.* vii. 154, sub *Barkhausia*).

Mar. sept.—Tanger! (*Webb Herb.*)! Inter Tanger et Tetuan! Prope Tetuan!

Mar. occid.—Prov. Haha haud procul Mogador!

Mar. merid.—Mskala! Sheshaoua!

Planta polymorpha, cujus varietates extricatu nimis difficiles. Caule primario eroso vel conculcato nascuntur e radice rami accessorii et planta fit biennis. Ex hac forma, in ditione Tingitana frequenti, nata est, nisi fallor, *C. taraxacoides* (Desf. Fl. Atl. ii. 231). Specimina in provinciis meridionalibus ad lusum (*C. præcocem*, Balb.) referenda videntur. Formam sequentem distinguo.

—— ——, var. INTYBACEA (*DC. Prod. l. c.*),=C. intybacea (*Brot. Fl. Lus.* i. 321).

Mar. sept.—Cap. Spartel! Tanger (*Salzm. Exsicc.*)!

Planta Algeriensis a cel. Cosson pro *C. intybacea* determinata videtur diversa a pl. Candolleana, et a spec. Siculis quæ habui a cl. Tineo.

—— ——, var. STELLATA, *nob.*=C. stellata (*Ball in Journ. Bot.* 1873, 371). Differt a typo caule graciliore minus ramoso oligocephalo, foliis magis hispidis, involucri foliolis exterioribus angustioribus, valde inæqualibus magis adpressis, interioribus margine membranaceis, post anthesin concavis stellatim expansis, receptaculo minus piloso.

Mar. merid.—In provinciis meridionalibus Imperii Maroccani sat frequens. Haha! Tasseremout! Ourika! Seksaoua! Aït Mesan! usque 1400 m.

Forma Maroccana *C. taraxacifoliæ* habitu proprio potius quam charactere technico, distinguenda. Achenia foliolis involucri subæquilonga, exteriora foliolis adhærentia.

Ar. Geog. *C. taraxacifolia* est sp. polymorpha per Europæ et reg. Mediterraneæ partem occidentalem late diffusa.

CREPIS BULBOSA (*L.*, sub *Leontodonte*; *Tausch in Flora*, 1828; *Boiss. Fl. Or.* iii. 832),=Ætheorhiza bulbosa (*Cass. Dict.* xlviii. 425; *DC. Pr.* vii. 160).

Mar. sept.—Prope Tanger! Cap. Spartel! (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

C. VIRENS (*L.*, *Boiss. Fl. Or.* iii. 848),=C. polymorpha (*Wallr. Sched. Crit.* 426; *DC. Pr.* vii. 162).

Mar. merid.—? Specimen unicum acheniis immaturis legi prope Milhaïn ad radices Atlantis Majoris!

Ar. Geog. Europa media. Regio Mediterranea fere omnis (inclusa Macaronesia) sed non ubique. In Oriente rara.

C. HOOKERIANA (*Ball in Journ. Bot.* 1873, 371; *non Clarke, Compos. Ind.* p. 255, anno 1876 edita).

Rhizoma perenne, crassum, sæpius furcatum; folia omnia radicalia, hirtula, lyrato-runcinata, lobis triangularibus acutis, sæpius denticulatis; scapus 4–8-pollicaris, adscendens, indivisus, medium versus bracteola lineari instructus; involucri foliola exteriora angusta, interiora nigrescentia, apice ciliolata, lana brevi plus minusve adspersa; receptaculi foveolarum margo membranaceus lacero-ciliolatus; ligulæ flavæ dorso rubellæ; achenia elongata, non compressa, lævia vel oculo armato tenuissime asperula; pappi nivei setæ scabriusculæ.

Mar. merid.—In regione superiore Atlantis Majoris, in monte Djebel Tezah! a 2400 m. ad 3000 m.!

Species probe distincta, affinis *C. oporinoidi* (Boiss. Voy. en Esp. ii. p. 388, tab. cxvii.). In hac scapus foliaceus, bifurcatus; folia pinnatifida, glabra, seu rarius parce lanata (nec hirtula), segmenta subæqualia, lineari-lanceolata, obtusiuscula, suprema elongata; margo foveolarum receptaculi brevissimus, vix membranaceus, sub lente minutissime ciliolatus; achenia costata. Celeb. Boissier *C. oporinoidi* suæ pappum plumosum et achenia compressa tribuit. In speciminibus plurimis a me exploratis pappi setas simplices sub lente asperulas, et achenium maturum subcylindricum, nec compressum semper observavi. *C. cæspitosa*, G. G., Moris (sub *Barkhausia*), facie plantæ nostræ simillima, differt acheniis rostratis cæterisque notis.

PHÆCASIUM (*Cass. Dict.* xxxix. 387).

P. PULCHRUM (*L., et DC. Pr.* vii. 160, sub *Crepide*; *Rchb. fil. Icon.* xix. tab. 80),=P. lampsanoides (*Cass. loc. cit.*).

Mar. merid.—In regione media et superiore Atlantis Majoris. In ascensu ad jugum Tagherot a 2500 m. ad 3000 m.! In monte Djebel Tezah circ. 3000 m.!

Ar. Geog. Europa media. Montes regionis Mediterraneæ. In Oriente (ex Boissier Fl. Or.) nascitur etiam in regione calidiore. In Macaronesia non visa.

HIERACIUM (*L. Gen.* 913).

H. PILOSELLA (*L., DC. Pr.* vii. 199).

Mar. merid.—In regione media et superiore Atlantis Majoris. In jugo Tagherot 2400–2900 m.! In monte Djebel Tezah ad 2400 m.!

Ar. Geog. Europa fere omnis (exclusa arctica). Asia temperata. Montes regionis Mediterraneæ (exclusa Macaronesia). In Asia Minore et in Græcia nonnisi in monte Olympo Bithynico detectum, sed adest forma proxime affinis *H. macranthum*, Ten.

Spec. nostra ex involucri pilis mollibus fuscis ad *H. pelleterianum* (DC. Fl. Fr. vi. 437, Prod. vii. 200) tendit. Hoc est nil nisi varietas sp. Linnæanæ, et formæ intermediæ nostris simillimæ in montibus Europa obviæ sunt.

ANDRYALA (*L. Gen.* 915).

A. RAGUSINA (*L., DC. Pr.* vii. 244).

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Mesfioua! Ourika!

Forma angustifolia, fol. inferioribus repando-dentatis, superioribus integerrimis. A formis similibus *A. integrifoliæ* distinguitur foveolarum receptaculi margine membranaceo lacero parce setoso, nec longe setoso.

—— ——, var. LYRATA (*DC. l. c.*), = A. lyrata (*Pourr. Act. Toul.* iii. 308).

Mar. occid.—? Legi nondum florentem in collinis prov. Haha haud procul Mogador!

Folia in spec. nostris pinnatifida lobis oblongis obtusis. Planta incerta, ulterius inquirenda; forsan est *A. pinnatifida* (Ait. H. Kew. iii. 129; DC. Prod. *l. c.*), planta Canariensis et Maderensis ab auctoribus plurimis confusa. Hæc, etsi facie diversa, inter formas *A. integrifoliæ*, L., enumeranda videtur. Confer Lowe, Man. Fl. Mad. i. 564.

Ar. Geog. A. ragusina est imprimis sp. Hispanica, in Gallia australi et Corsica etiam obvia. Ex Dalmatia non vidi specimina, nec adest in Vis. Fl. Dalm. In Africa boreali vix ultra Imp. Maroccanum detecta.

ANDRYALA MOGADORENSIS (*Coss. in Bull. Soc. Bot. Fr.* xx. 252).

"Planta *perennis*, tota indumento molli cinereo-canescente demum rufescente tomentosa, caudice brevissimo sublignoso in radicem descendentem abeunte caules 1–2 vel plures emittente. Caules erecti vel a basi arcuata ascendentes, indurati, superne ramosi, ramis patentibus. *Folia integra vel obsolete subsinuata obtusa*, infima obovato-oblonga in petiolum brevem attenuata, *caulina* approximata oblonga vel obovato-oblonga sessilia *basi lata semiamplexicaulia*. Capitula apice ramorum laxiuscule cymoso-corymbosa, breviter pedunculata, cymis corymbum generalem efformantibus. *Involucrum lana densa* sordide alba demum rufescente lanato-*gossypinum pilis longioribus* rigidioribus apice *glanduligeris* nigricantibus *permixtis*, foliolis linearibus acutis. Ligulæ aurantiacæ, involucrum superantes. *Achænia fusco-purpurea, oblongo-cylindracea,* inferne attenuata, sub-10-striato-costata, *costis concoloribus.*

"Caudice perenni, caulibus induratis, nonnullisque aliis notis ad *A. ragusinam*, L., collocanda, sed abunde distincta foliis omnibus obtusis integris vel obsolete subsinuatis, caulinis basi lata semiamplexicaulibus, pedunculis brevibus, involucri foliolis præter lanam pilis longioribus glanduliferis donatis, achæniis duplo brevioribus oblongo-cylindraceis costis concoloribus, non lineari-cylindraceis costis albidis."

Mar. occid.—In rupibus maritimis insulæ Mogador! ubi primus detexit cl. Balansa. In maritimis ab urbe Saffi meridiem versus!

Achenia omnino matura fiunt atra costis concoloribus. Receptaculum ad foveolarum margines longe setosum.

Spec. quæ juxta Saffi legimus gaudent foliis angustioribus oblongis, subsinuatis.

ANDRYALA INTEGRIFOLIA (*L., DC. Pr.* vii.; *Willk. et Lge. Fl. Hisp.* ii. 271).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*, sub *A. pinnatifida*) Tetuan (1851)!

Mar. occid.—Casa Blanca!

Mar. merid.—Amsmiz! Mtouga!

—— ——, var. ARENARIA (*Boiss. Voy. Esp.* 394), = A. arenaria (*Boiss. et Reut. Pug.* 71).

Mar. sept.—Tetuan!

Mar. occid.—Mazagan! Mogador! In arenosis prov. Haha haud procul Mogador!

Mar. merid.—Shedma! Ourika!

Ar. Geog. Species regionis Mediterraneæ occidentalis.

Planta polymorpha in plurimas species falsas ab auctoribus dilaniata et synonymia igitur intricatissima. Forsan non satis differt *A. dentata,* Sibth. et Sm.; = *A. tenuifolia,* DC., species in reg. Mediterranea orientali obvia.

A. LAXIFLORA (*Salzm. in DC. Pr.* vii. 247).

Mar. sept.—Tanger (*spec. ex Herb. Schousb.*)! (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca (spec. unicum legit J. D. H.)!

Ar. Geog. Ditio Maroccana. Hispania australis.

HYPOCHÆRIS (*L. Gen.* 918).

H. GLABRA (*L., DC. Pr.* vii. 90).

Mar. sept.—Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca! Aïn el Hadjar haud procul Mogador!

Mar. merid.—Sektana! Seksaoua! Mskala!

—— ——, var. foliis insigniter hispidis, pedunculis vix incrassatis, = H. hispida (*Brot. Fl. Lus.* i. 332)?

Mar. merid.—Prov. Shedma! In convalle Aït Mesan ad 1600 m. (?)!

Spec. ex Aït Mesan immaturum foliis runcinatis insigne incertum est.

—— ——, var. SALZMANNIANA (*Coss. MSS.*), = H. Salzmanniana (*DC. Pr.* vii. 91), = H. dimorpha (*Salzm., non Brot. nec Ten.*).

Mar. sept.—Tanger (13 Jun.)! (*Salzm. Exsicc.*, sub "*H. dimorpha*")!

Hæc est proles luxurians *H. glabræ,* pedunculis superne valde incrassatis, involucri foliolis paullo latioribus.

—— ——, var. EROSTRIS (*Coss. et Germ. Fl. Par.*), = H. arachnoidea (*Poir. Dict.* v. 572; *DC. Pr.* vii. 90).

Mar. merid.—Mesfioua!

Ar. Geog. Species per Europam omnem (exclusa arctica) et regionem Mediterraneam late diffusa. In ins. Azoricis et in Madera obvia, deest, ut videtur, in ins. Canariensibus. Var. *Salzmanniana* est ditionis Tingitanæ et Hispaniæ Granatensis propria civis; var. *erostris* per regionem omnem imprimis calidiorem dispersa est.

HYPOCHÆRIS RADICATA (*L., DC. Pr.* vii. 91), var. HETEROCARPA (*Moris, Fl. Sard.* ii. 487),=H. neapolitana (*DC. Pr.* vii. 91),=H. dimorpha (*Ten. Syn. Fl. Neap.* 407, *non Brot. nec Salzm.*).

Mar. sept.—Inter Tanger et Tetuan (J. D. H., spec. unicum immaturum)! Tetuan (*Webb Herb.*)!

Mar. merid.—Sheshaoua! Shedma (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Per Europam omnem et regionem Mediterraneam fere omnem diffusa. Var. nostra frequentior in calidioribus. Species deest in ins. Canariensibus. In Madera adest tantum forma typica acheniis omnibus æqualiter rostratis.

Sectiones hujus generis *Arachnites* et *Porcellites,* a Candolleo in 'Prodromo' admissæ, et a Benth. et H. fil. (Gen. Pl. ii. 520) conservatæ, plane delendæ sunt; characteres enim quibus nituntur omnino variabiles nec ad species definiendum idoneæ.

H. ÆTHNENSIS (*L. et DC. Pr.* vii. 95, sub *Seriola*),=Hypochæris serioloides (*Bert. Misc.* ii. 236).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (*Webb Herb.*)! In monte Beni Hosmar!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

H. LÆVIGATA (*L., et DC. Pr.* vii. 96, sub *Seriola*),=Piptopogon decipiens (*Cass. Dict.* xlviii. 507).

Mar. sept.—Tanger (*spec. ex Webb Herb.*)! In monte Beni Hosmar pr. Tetuan! (*Webb Herb.*)!

Ar. Geog. Africa borealis. Sicilia.

H. leontodontoides (*Ball in Journ. Bot.* 1873, 371).

Radix crassa, subverticalis, divisa, ad collum foliis emarcidis vestita; folia rosulata, obovato-spathulata, obtusa, vel obverse lanceolata, integra, acuta, repando-denticulata, subglaberrima, vel pilis crispis simplicibus vestita; scapi breves filiformes; involucrum paucifoliolatum, subregulariter imbricatum, extus pubescens, foliolis exterioribus interdum pilis paucis longioribus fuscis munitis; receptaculi paleæ hyalinæ, apice setiferæ, coloratæ, achenia (juniora) excedentes; pappus ex radiis 10 longioribus deciduo-plumosis basi parum expansis, cæteris (fere 10) dimidio brevioribus inter priores extus adjunctis; achenia nimis immatura ulterius observanda.

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan! et in jugo Tagherot! a 2400 m. ad 3200 m.

Ab *H. lævigata* foliis integris rosulatis, scapis gracilibus nudis, involucri foliolis pubescentibus adpressis, videtur longe diversa. Cel. Cosson tamen certiorem me fecit hanc esse priori proxime affinis. Achenia immatura videntur suberostria illis *S. lævigatæ* dimidio breviora. Planta ulterius inquirenda pro subspecie haud sine dubio hic enumerata.

Pappus in pl. nostra radiis longioribus basi vix expansis ad confirmandam sententiam celebb. Benth. et H. fil., qui *Seriolam* Linnæanam ad sectionem *Hypochæridis* reduxerunt, non parvi momenti est.

LEONTODON (*L. Gen.* 912; *Benth. et H. fil. Gen. Pl.* ii. 520).

L. AUTUMNALIS (*L.*, *DC. Pr.* vii. 108, sub *Oporinia*; *Hoffm.*, sub *Apargia*), var. ATLANTICUS, *nob.* Planta nana glabra, foliis radicalibus runcinato-pinnatifidis, scapis nudis brevibus, involucri foliolis adpressis nitidis, acheniis immaturis apicem versus parum attenuatis, pappi radiis æqualibus ad basin vix incrassatis.

Mar. merid.—In convalle Aït Mesan circ. 2500 m.!

Var. nostra ad var. *minimam* (DC. Pr. *l. c.*) accedit. Hæc tamen differt capitulis albo-villosis.

Ar. Geog. Species per Europam septentrionalem et mediam, necnon in Sibiria late diffusa, fit rara in regione Mediterranea. Vidi tantum ex montibus Italiæ, Hispaniæ, Galliæ australis et Dalmatiæ.

L. ROTHII, *nob.*,=Thrincia hispida (*Roth, Catal. Bot.* i. 99; *DC. Pr.* vii. 100, *non Fl. Fr.*),=Colobium hispidum (*Roth in Rœm. Arch.* i. 38),=Thrincia taraxacoides (*Gaud. Fl. Helv.* v. 49, quoad var. *a*),= Leontodon nudicaulis (*Solander MSS. in Herb. Mus. Brit.* pro parte, conf. *Lowe, Man. Fl. Mad.* i. 535),=Hyoseris arenaria (*Schousb. Gew. Marok*, 183),=Thrincia mauritanica (*Spreng. Syst.* iii. 666, pro parte), =Leontodon saxatile (*Lam. Dict.* iii. 531).

Mar. sept.—Frequens in dit. Tingitana. Legimus pluries prope Tanger! et juxta promont. Spartel! Inter Tanger et Tetuan! juxta urbem Tetuan! et formam foliis pinnatifidis inter Tetuan et Ceuta! Habui ex arenosis Tingitanis ex herb. Webb!

Mar. occid.—Casa Blanca! Aïn el Hadjar et Djebel Hadid haud procul Mogador!

Mar. merid.—Occurrit passim in regione inferiore et in convallibus calidioribus Atlantis Majoris. Prov. Shedma! Marocco in ruderatis! Seksaoua! Mtouga! Milhaïn! In convalle Aït Mesan usque 1600 m.!

—— ——, var. MAJOR (*Boiss. Voy. Esp.* 378; *Willk. et Lge. Fl. Hisp.* ii. 214),=var. *microrhynchoides*, Ball, MSS. Folia sinuata vel repando-dentata, hispida, pilis (præsertim in nervo medio) apice glochidiatis; pappus 10-radiatus, radiis externis paucis brevissimis. Huc forsan *L. nudicaulis* (Lowe, Prim. Fl. Mad. 47, sub *Thrincia*) referenda.

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Mar. merid.—In saxosis aridis reg. inferioris prov. Shedma! Misra Ben Kara haud procul urbe Marocco!

Ar. Geog. Species in regione Mediterranea occidentali (inclusa Macaronesia) satis frequens. Varietates plurimæ in Hispania et in Africa boreali.

Invito animo nomen novum proposui, dum nomen triviale *hispidus* ad aliam speciem Linnæanam pertinet; nomen *taraxacoides* improprium est, dum adsunt *L. taraxacum*, L., *L. taraxaci*, Lois., et *L. taraxaconoides*, Rœnsch, et *L. arenarius* ad formam *L. hirti* (*Thrinciæ hirtæ* auct.) a plerisque auctoribus acceptum, *nudicaulis* denique ab ipso Solander cum *L. hirto* confusus.

LEONTODON MAROCCANUS (*Pers. Syn.* ii. 308, et *DC. Pr.* vii. 100, sub *Thrincia*),=Thrincia mauritanica (*Spreng. Syst.* iii. 666, pro parte),= Hyoseris hispida (*Schousb. Gew. Marok*, 183, sec *DC. Prod. l. c.*).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb spec.*)! In monte Djebel Kebir! In collinis inter Tanger et Tetuan!

Mar. centr.—Prope Mequinez (*Schousb. l. c.*).

Mar. occid.—In montosis aridis ad Mogador (*Brouss. ex DC. Pr.*). A recentioribus non detectus.

Ar. Geog. Imp. Maroccanum. Hispania australis.

Stirps nostra, a Sprengelio et auct. recentioribus cum præcedente confusa, videtur probe diversa, capitulis majoribus, ligulis externis in dorso pilosiusculis fuscis, acheniis majoribus muriculatis, marginalibus pappo coroniformi fimbriato, interioribus rostro longissimo quam achenium ipsum quadruplo longiore donatis, receptaculo demum læviusculo, margine foveolarum subobsoleto non piloso.

L. TINGITANUS (*Boiss. et Reut. Pug.* 68, sub *Thrincia*).

Mar. sept.—Prope Tanger (*Boiss. et Reut.*, spec. incompletum in Herb. Kew.)!

Ar. Geog. Nonnisi in ditione Tingitana et in Hispania Arundana hucusque detectus. Specimina completa Tingitana non vidi, sed exemplar Hispanicum anno 1851 prope Ronda lectum his omnino conforme est.

Indumento ex pilis furcatis subvelutino insignis, verisimiliter probe distincta species.

Speciei hujus sectiones (*Thrinciæ*, auct.) extricatu difficillimæ sunt. Affinitas inter *L. hirtum* (L., DC. Pr., sub *Thrincia*) et *L. Rothii* nostro (*Thrincia hispida*, Roth) tam proxima ut exemplaria sæpe difficiliter dignoscuntur; et, pace tantorum virorum, sectio *Streckera*, a celebb. Benth. et H. fil. in Gen. Pl. loc. cit. laudata, a *Thrincia* separari nequit. Radix annua in *L. Rothii* (ut jam innotuit b. Lowe) in calidioribus sæpe perennans, et post annum primum fit præmorsa. Numerus radiorum pappi nullomodo constans ut voluerunt cll. Boiss. et Reuter, sed in *L. Rothii* sæpissime 10 et semper pauciores sunt quam in *L. hirto*. Pili non semper simplices.

L. HELMINTHIOIDES (*Coss. et Dur. ined.*), var.=L. hispanicus, var. Ballii, *Benth.*

Scapi simplices breves, bracteis 1–2 linearibus instructi; involucri foliola pauciora quam in typo, minus regulariter imbricata—foliola interiora latiuscula; ligulæ extus rubellæ nec virentes; receptaculi foveolæ margine brevissime membranaceæ non ciliatæ; achenia apicem versus attenuata, vix, aut ne vix, rostrata, subtiliter corrugato-asperula (nec muriculata); pappi radii longiores plumosi, exteriores breviores setacei.

Mar. merid.—Legi in convalle Amsmiz circ. 1400 m.! Spec. acheniis immaturis in monte Djebel Ouensa ab indigeno Ibrahim lecta benev. comm. cel. Cosson!

Ar. Geog. Species Algeriensis; var. nostra Atlantis Majoris civis est.

L. helminthioides, L. hispanico (Mérat in Ann. Sc. Nat. xxii. 106; DC. Pr. vii. 127, sub *Asterothrici*) proximus est. Satis differre videtur acheniorum et pappi structura, et præsertim foveolis receptaculi subobsoletis margine non ciliatis. In hac grege tamen characteres valde incerti. Ne dicam de notis specificis, characteres etiam generis nullomodo stabiles sunt. Inter specimina *L. hispanici* ad Fuente de la Higuera lecta (Bourgeau, Pl. d'Espagne, No. 1600) video achenia exteriora incurva extus furfuracea, nec costato-striata, pappo brevissimo fimbrillifero coronata omnino ut in *Picride lyrata,* Del.

LEONTODON HISPIDULUS (*Del. Fl. Eg.* 117, tab. 42. sub *Crepide*; *DC. Pr.* vii.109, sub *Oporinia*; *Boiss. Fl. Or.* iii. 727), = Kalbfussia orientalis (*Jaub. et Spach, Ill. Pl. Or.* iii. 117, tab. 283), = Leontodon trivialis (*Ball in Journ. Bot.* 1873, 372).

Mar. merid.—Legi prope Aïn Oumast, prov. Shedma! et in prov. Mtouga! Specimen unicum in ruderatis urbis Marocco!

Ar. Geog. Species Ægyptiaca et Maroccana, cujus var. (*Millina persica,* Boiss. Diagn. Pl. Or. ser. 1, vii. 3) per regionem desertorum Persiæ australis, Syriæ, Arabiæ diffusa est. Ex Algeria non vidi specimina. Planta ulterius inquirenda.

Planta glabriuscula vel pilis simplicibus adspersa; scapus primarius erectus, posteriores plurimi adscendentes, omnes aphylli, sæpius furcati 1–3-cephali; folia lanceolata repando-dentata; involucrum glabrum vel tenuiter araneoso-pubescens; receptaculum fimbriatum; achenia in rostrum ipsis æquilongum attenuata, pappi radiis 10 plumosis, basin versus dilatata.

Stirps satis ludibunda. Spec. nostra aspectu diversa habui pro specie nova; sed nullis notis gravioribus a planta Ægyptiaca separanda videntur. *Apargia annua* (Vis. Pl. Æg. 38, tab. 6), a cel. Boissier *l. c.* inter synonyma sp. nostræ citata, ob achenia pluries breviora, apice attenuata sed erostria, videtur satis distincta species.

Planta Maroccana sæpissime erosa vel sub pedibus conculcata videtur annua, radice indurata interdum (?) perennante.

L. SALZMANNI (*Sch. Bip. in Flora,* 1833, 723, et *DC. Pr.* vii. 101, sub *Kalbfussia*), = Apargia verna (*Salzm. Exsicc.* 1825).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Ar. Geog. Africa borealis. Hispania. Var. vel subspecies (*Kalbfussia Mülleri,* Sch. Bip. *l. c.*) in Sardinia et Sicilia.

Nomen triviale Salzmannianum *vernus* prioritate gaudet, sed nolui mutare nomen ab auctoribus omnibus recentioribus acceptum.

LEONTODON TUBEROSUS (*L., Willd. Sp. Pl.* iii. 1549, sub *Apargia DC. Pr.* vii. 100, sub *Thrincia*).

Mar. sept.—Inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia).

Nomen genericum *Leontodon* generis masculini a Linnæo pluribusque auctoribus ad gen. neutrum refertur.

TARAXACUM (*Hall, Stirp. Helv.* i. 23).

T. OFFICINALE (*Wigg. Prim. Fl. Hols.* 56),=T. Dens Leonis (*Desf. Fl. Atl.* ii. 228; *DC. Pr.* vii. 145).

Mar. merid.—Legi in irrigatis umbrosis juxta Sheshaoua! Distr. Reraya ad 1000 m.! et formam montanam in convalle Aït Mesan supra Arround circ. 2400 m.! in jugo Tagherot usque 2800 m.! et in monte Djebel Tezah!

Ar. Geog. Per hemisphæram borealem fere omnem diffusum, et inde in temperatis hemisphæræ australis introductum.

LACTUCA (*L. Gen.* 909).

L. VIMINEA (*L.*, sub *Prenanthe*; *Lam. Dict.* ii. 27, sub *Chondrilla*; *DC. Pr.* vii. 176, sub *Phænopo*; *Link, Enum. H. Ber.* ii. 281),=Phœnixopus decurrens (*Cass. Dict.* xxxix. 391).

Mar. merid.—Seksaoua! Aït Mesan! Spec. ex Djebel Ouensa ab indigeno Ibrahim lectum benevole comm. cel. Cosson.

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). Occurrit etiam hinc inde in calidioribus Europæ mediæ.

Verisimiliter ad varietatem hujus sp. referendum est specimen nondum florens a cl. G. Maw inter Ourika et Reraya lectum, foliis (nisi imis) indivisis repando-denticulatis, lanceolatis acutis, basin versus in petiolum longum decurrentem sensim attenuatis.

L. TENERRIMA (*Pourr. Act. Toul.* iii. 322; *DC. Pr.* vii. 134).

Mar. merid.—In convallibus calidioribus et ad radices Atlantis Majoris haud infrequens. Aït Mesan usque 1000 m.! In convalle Amsmiz 1200–1500 m.! supra Seksaoua! In rupibus supra Milhaïn circ. 1000 m.!

Ar. Geog. Hispania. Gallia australis. Italia subalpina. Ex Africa nisi nostra, spec. nulla vidi.

L. SALIGNA (*L., DC. Pr.* vii. 136).

Mar. sept.—Vidi nondum florentem prope Tanger! spec. ex herb. Schousboe dedit cel. Cosson!

Mar. merid.—? Legi nondum florentem in convalle Aït Mesan! et folia in distr. Reraya! Spec. incerta, verisimiliter huc referenda.

Ar. Geog. Europa media. Regio Mediterranea fere omnis (exclusa Macaronesia).

PICRIDIUM (*Desf. Fl. Atl.* ii. 220).

P. TINGITANUM (*L.*, sub *Scorzonera*; *Lam. Dict.* iii. 397, sub *Soncho*; *Desf. loc. cit.*; *DC. Pr.* vii. 182). Huc etiam *P. Hispanicum* (Poir. Dict. xl. 197); et sicut varietates enumeranda sunt *P. arabicum* (Hochst. et Steud. in Schimp. Pl. Arab. Exsicc.) et *P. orientale* (Pers. Syn. ii. 362).

Mar. sept.—Occurrit passim in hac regione. Tanger! (*Webb spec.*)! (*Salzm. Exsicc.*)! Cap. Spartel! In Tanger et Tetuan! Inter Tetuan et Ceuta!

Mar. occid.—Salli (*Brouss.*). Casa Blanca! Prope Saffi! Prov. Haha pr. Mogador! Aïn el Hadjar haud procul Mogador!

Mar. merid.—Valde frequens in reg. inferiore. Prov. Shedma! Prov. Mzouda! Mskala! Seksaoua! Mesfioua! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. MARITIMUM, = P. ligulatum (*Vent. Malm., fide DC. Pr. loc. cit.* quoad plantam Mogadorensem). Huc etiam var. *diversifolium* (DC. Pr. *l. c.*).

Mar. occid.—Frequens in maritimis prope Mogador, præsertim in insula.

—— ——, var. MAROCCANUM, *nob.* Planta insignis, ulterius inquirenda, pedalis et ultra, e basi ramosa, ramis erectis æquilongis parce foliaceis; folia radicalia desunt, caulina semiamplexicaulia profunde pinnatifida lobis oblongo-cuneatis 2–3 utrinque instructa, lobo terminali elongato; capitula aliquantulum minora, cætera ut in *P. tingitano*. Radix videtur annua?

Mar. merid.—Mesfioua!

Ar. Geog. Species per regionem omnem Mediterraneam calidiorem (inclusa Macaronesia) et inde per Indiam bor. occidentalem et Abyssiniam late diffusa. Deest in Gallia australi, in Italia continentali, et in Dalmatia.

Stirps polymorpha quoad formam foliorum et involucri valde ludibunda. *P. ligulatum* auctorum vix pro varietate distinguendum est. Specimina huc a Candolleo relata (Prod. *l. c.*) sec. cel. Boissier potius formam maritimam *P. vulgaris* sistunt.

Achenia in *Picridiis* omnibus a me exploratis biformia sunt. Exteriorum series 3–4-, sæpius 4-sulcatæ (in eodem capitulo occurrunt ach. 5-sulcata), rugosa, tuberculata, interiora breviora subconica, obsolete 4-sulcata, vix tuberculata, in *P. tingitano* integumento albescente crassiusculo munita (conf. Boiss. Fl. Or. iii. 327). Descriptio generis in DC. Prod. *l. c.* parum accurata.

P. VULGARE (*Dsf. Fl. Atl.* ii. 221; *DC. Pr.* vii. 182), = Scorzonera picroides, *L.*

Mar. sept.—Tanger! (*Webb Herb.*)! Cap. Spartel (*Webb Herb.*)! Inter Tetuan et Ceuta!

Mar. occid.—Mogador (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Specimina nobis ex vicin. Agadir allata habent achenia longiora et centralia superne magis attenuata.

SONCHUS (*L. Gen.* 908).

S. OLERACEUS (*L. Sp. Pl.* 1116, excl. varr. γ et δ), = S. ciliatus (*Lam. Fl. Fr.* ii. 87; *DC. Pr.* vii. 185).

Mar. sept.—Tanger (*Webb Herb.*)! Cap. Spartel! Inter Tetuan et Ceuta!

Mar. occid.—Mogador! (*Lowe Cat.*).

Mar. merid.—Sheshaoua! In horto irrigato Ben Dreis urbis Marocco! Spec. unicum in monte Djebel Tezah legit J. D. H.! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Species cosmopolita per orbem terrarum fere omnem diffusa.

S. ASPER (*Vill. Dauph.* iii. 158), = S. fallax (*Wallr. Sched. Crit.* 432; *DC. Pr.* vii. 185).

Mar. sept.—Tanger (*Webb Herb.*)!

Mar. merid.—In convalle Aït Mesan 1200–1500 m.! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Sicut *S. oleraceus* affinis *S. asper* per orbem fere totum diffusus est.

S. glaucescens (*Jord. Obs.* v. 75, tab. 5; *Boiss. Fl. Or.* iii. 796), = S. græcus, *Reut. MSS.*

Mar. merid.—Sheshaoua!

Ar. Geog. In Gallia australi, Hispania, Græcia, et in Oriente indicatus, verisimiliter per totam regionem Mediterraneam diffusa.

S. TENERRIMUS (*L., DC. Pr.* vii. 186), = S. pectinatus (*DC. loc. cit.*), forma perennis.

Mar. sept.—Tanger! (*Webb Herb.*)! In monte Beni Hosmar prope Tetuan (*Webb Herb.*)! Inter Tetuan et Ceuta!

Mar. occid.— Mazagan! Mogador (*Lowe Cat.*).

Mar. merid.—Frequens in regione inferiore. Seksaoua! Aïn Tarsil! Milhaïn!

—— ——, var. MARITIMUS, *nob.* Forma insignis radice perenni reptante, foliis in lacinias plurimas integras lineares, vel ovatas erosodentatas, v. pinnatifidas, retrorsum versas divisis; involucro nudo, nec ad basin araneoso-floccoso.

Mar. sept.—In rupibus maritimis a promontorio Spartel meridiem versus!

Mar. occid.—Saffi! Prope Mogador in arenosis maritimis!

—— ——, var. TUBERCULATUS, *nob.* Priori subsimilis, sed major; capitula majora; ligulæ aurantiacæ; folia minus divisa auriculis magnis semiamplexicaulibus; achenia insigniter rugoso-tuberculata, breviora et latiora quam in typo.

Mar. occid.—In rupibus insulæ Mogador!

—— ——, var. ARBORESCENS, = S. arborescens (*Salzm. Exsicc.*)!

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Inter Tanger et Tetuan! Tetuan (*Webb spec.*)!

Planta elata 6–8-pedalis in sepibus et dumetis satis frequens. Caules farcti angulati; folia interrupte pinnipartita, lobis subintegerrimis, terminali maximo triangulari-cordato vel trilobo. Ab hoc vix differt *S. pustulatus* (Willk. in Fl. Hisp. ii. 242).

Ar. Geog. *S. tenerrimus* per totam regionem Mediterraneam diffusus, et in Abyssinia obvius, in Imp. Maroccano vulgaris, deest, ut videtur, in Macaronesia.

Stirps in ditione nostra proteiformis variat statura, forma foliorum, radice annua vel perenni, pedunculis glabris vel glandulosis, sed ex his notis varietates satis stabiles ægre definiendæ.

SONCHUS FRAGILIS (*Ball, MSS. in herb.* 1851, *in Journ. Bot.* 1873, 372), = S. tenerrimus, *L.*, var. pectinatus, *Coss. in Bourgeau, Pl. d'Algérie* (1856, No. 84).

Radix perennis crassa, suberosa; caules breves foliosi; folia pinnata, segmentis subalternis, ovato-rotundis, acutiusculis; pedunculi breves, apice non floccosi; involucri foliola et ligulæ latiores quam in *S. pectinato*; achenia vix, aut ne vix, compressa, costis 4–5 prominentibus, tam in costis quam in interstitiis lævissima.

Mar. sept.—In rupibus juxta urbem Tetuan! et in monte Beni Hosmar Legi anno 1851 et iterum 1871.

Acheniis diversissimis præter habitum singularem a *S. tenerrimo* optime dignoscitur. Si ullo alio foret *S. maritimo*, L., magis affine; sed in hoc achenia 8-costata.

Ar. Geog. Algeria. Ditio Tetuanensis.

S. MARITIMUS (*L.*, *DC. Pr.* vii. 187).

Mar. merid.—Secus rivulos irrigatorios urbis Marocco! vidi etiam in prov. Mtouga!

Ar. Geog. Regio Mediterranea exclusa Macaronesia. Deest, ut videtur, in Græcia et in Asia Minore.

Folia in sp. Maroccanis integra margine minute denticulata.

S. ACIDUS (*Schousb. in Willd. Sp. Pl.* iii. 1511; *DC. Pr.* vii. 188).

Mar. occid.—Specimen unicum legi in arenosis maritimis pr. Mogador! (*Broussonnet*), *ex DC. Pr.*

Ar. Geog. Marocco occidentalis. In insula Lancerota sec. Bourgeau exstat planta unica forsan casu aliquo a Mogador allata.

Species valde proxima *S. pinnato* Canariensi.

MICRORHYNCHUS (*Less. Syn. Compos.* 139).

M. NUDICAULIS (*L.*, sub *Chondrilla*; *Less. loc. cit.*; *DC. Pr.* vii. 180).

Mar. occid.—Casa Blanca! Prov. Haha prope Mogador! Agadir (*Coll. Indigeni* 1871)!

Mar. merid.—Frequens in saxosis aridissimis planitiei, nec deest in regione inferiore Atlantis Majoris. Prov. Shedma prope Aïn Oumast! Mskala! Sheshaoua! Misra Ben Kara! Prope urbem Marocco! In convalle Aït Mesan usque 1500 m.! Milhaïn!

Spec. Maroccana sæpe ambigua sunt inter typum Candolleanum et var. *divaricatum.*

Ar. Geog. Africa borealis. Arabia. Hispania austro-orientalis. Ins. Canarienses. Deest in Madera.

M. SPINOSUS (*Forsk. Fl. Æg.-arab.* 144, sub *Prenanthe*; *Lam. Dict.* iii. 408, sub *Lactuca*; *DC. Pr.* vii. 189, sub *Soncho*; *Benth. et H. fil., Gen. Pl.* ii. 529),=Zollikoferia spinosa (*Boiss. Fl. Or.* iii. 826).

Mar. merid.—In saxosis aridis regionis inferioris et ad radices Atlantis Majoris. In collibus arenaceis prope urbem Marocco (*G. Maw*)! Supra Seksaoua! In convalle Aït Mesan!

Ar. Geog. Regiones desertæ Arabiæ et Ægypti. Marocco meridionalis. Adest etiam in insulis Capitis Viridis et Canariensibus, et rarius in Hispania austro-orientali.

Cel. Boissier in 'Fl. Orientali' *Microrhynchum* cum gen. Candolleanis *Zollikoferia* et *Brachyrampho*, et Cassinianis *Lomatolepide* et *Rhabdotheca* in unum genus optimo jure conjunxit; sed immerito nomen antiquius *Microrhynchum* recentiori *Zollikoferiæ* postposuit.

TRAGOPOGON (*L. Gen.* 905).

T. PORRIFOLIUS (*L.*, *DC. Pr.* vii. 113).

Mar. merid.—Seksaoua! Ourika (*J. D. H.*)! Mesfioua (*J. D. H.*)! Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea Europæ et Africæ borealis. Ins. Canarienses. In Europa media, verisimiliter introductus. Deest in Madera. In Asia Mediterranea adest forma proxime affinis (*T. longirostris*, Bisch. in Webb Phyt. Can. ii. 469).

Specimina ex Mtouga et Seksaoua formam hujus sp. (*T. australem*, Jord. Cat. Dij. 1848) sistunt. Hic mihi videtur fere medius inter sp. Linnæanam et *T. longirostrem*, quem, pace cel. Boissier, pro varietate, vel ad summum pro subspecie habeo. Specimen a cel. Hooker ad Mesfioua lectum vix a *T. longirostri* differt.

T. GLABER (*L.*, *et DC. Pr.* vii. 111, sub *Geropogone*; *Benth. et H. fil. Gen. Pl.* ii. 531).

Mar. occid.—'In agro Mogadorensi (*Broussonnet*)!,' *DC. Prod. l. c.*

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia), sed nullibi frequens.

UROSPERMUM (*Scop. Introd. No.* 366).

U. DALECHAMPII (*L.*, sub *Tragopogone*; *Desf. Cat. H. Par.* 90; *DC. Pr.* vii. 116).

Mar. sept.—Inter Tanger et Tetuan (*J. D. H.*)! Vidi etiam in collibus pr. Tanger!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia). Fertur in Thracia et in insulis Archipelagi, sed a recentioribus non visum.

U. PICROIDES (*L.*, sub *Tragopogone*; *Desf. Cat. H. Par.* 90; *DC. Pr.* vii. 116).

Mar. sept.—Tanger (*Webb Herb.*)! Cap. Spartel! Tetuan!

Mar. occid.—Casa Blanca! Mazagan! Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Prov. Shedma!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

SCORZONERA (*L. Gen.* 906).

S. UNDULATA (*Vahl, Symb.* ii. 86; *DC. Pr.* vii. 117).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Tetuan (*Webb Herb.*)!

Mar. merid.—Ad radices Atlantis Majoris. Mesfioua! Ourika! Tasseremout! In convalle Aït Mesan!

Ar. Geog. Africa boreali-occidentalis. Fertur in Oriente, sed monente cel. Boissier planta orientalis ad speciem diversam, *S. Alexandrinam* suam, referenda est.

S. DELICIOSA (*Guss. Ind. Sem. H. Bocc.* 1825; *DC. Pr.* vii. 118), var. TETUANENSIS, = S. Tetuanensis (*Webb MSS. in Herb.*).

Mar. sept.—In regione collina inter Tanger et Tetuan! Prope Tetuan! (*Webb Herb.*)!

Planta Tetuanensis differt a typo Siculo foliis et involucri foliolis pluries (sæpe ter) latioribus. Specimina Algeriensia *S. deliciosæ* tamen intermedia sunt; et in hoc genere folia latitudine valde variabilia. Achenia matura non vidi.

Ar. Geog. *S. deliciosa* nonnisi in Sicilia et in Africa boreali-occidentali hucusque detecta fuit.

S. PYGMÆA (*Sibth. et Sm. Fl. Gr.* viii. 61, tab. 783; *DC. Pr.* vii. 123).

Mar. merid.—In regione alpina Atlantis Majoris, in jugo Tagherot legi spec. nondum florentia quæ mihi incertæ sedis manebant donec cel. Cosson certum me fecit hæc ad *S. pygmæum*, S. S., referenda esse, et spec. florentia, mense Junio 1874 in monte Djebel Ouensa ab indigeno Ibrahim lecta, benev. communicavit!

Ar. Geog. Distributio hujus sp. anomala est. Olim in monte Olympo Bithynico, nec alibi in Oriente, detecta, postea in summis cacuminibus Atlantis Minoris Algeriæ (Djebel Chelliah, Djebel Tougour) reperta, et demum in Atlante Majore.

Cll. Rein et Fritsch in jugo Tagherot specimina incompleta *Scorzoneræ* sp. nanæ mox floribundæ legerunt, *S. pygmææ* certe affinis. In his folia subglaberrima, nec sericeo-lanata, et involucrum videtur diversum. Planta ulterius inquirenda.

SCORZONERA LACINIATA (*L., Boiss. Fl. Or.* iii. 757),=Podospermum laciniatum (*DC. Fl. Fr.* iv. 61, *et Prod.* vii. 111).

Mar. sept.—Inter Tanger et Tetuan!

Mar. merid.—In regione inferiore Atlantis Majoris haud infrequens. Aït Mesan usque 1600 m.! In convalle Amsmiz circ. 1400 m.! Distr. Reraya ad 1000 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). In Europa media calidiore.

Specimina nostra ambigua sunt inter typum et var. *calcitrapifoliam* (Boiss. *l. c.*),=*S. calcitrapifolia* (Vahl, Symb. ii. 87), formam foliorum segmentis latioribus.

LOBELIACEÆ (*Juss. Ann. Mus.* xviii. 1).

LAURENTIA (*Mich. Nov. Gen.* 18).

L. MICHELII (*A. DC. in Prod.* vii. 409),=Lobelia Laurentia (*L., Desf. Fl. Atl.* ii. 312; *Schsb. Gew. Marok*, 73).

Mar. sept.—In humentibus montis Djebel Kebir pr. Tanger (*Schsb. l. c.*).

Mar. occid.—Prope Aïn el Hadjar haud procul Mogador!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

CAMPANULACEÆ (*Juss. Gen.* 163).

JASIONE (*L. Hort. Cliff.* 426).

J. BLEPHARODON (*Boiss. et Reut. Pug.* 72).

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Mar. merid.—Prov. Shedma juxta castellum gubernatoris

Ar. Geog. Peninsula Iberica. Marocco.

Verisimiliter ad subspeciem *J. montanæ*, L., reducenda.

J. CORYMBOSA (*Poir. Dict. Suppl.* iii. 131; *DC. Pr.* vii. 415),=J. montana (*Schousb. Gew. Marok*, 70, non aliorum).

Mar. sept.—Tanger! (*Salzm. Exsicc.*, sub *J. arenaria*)! (*Schsb. l. c.*). In monte Djebel Kebir!

Mar. occid.—Casa Blanca!

Ar. Geog. Africa boreali-occidentalis. Hispania Granatensis.

J. CORNUTA (*Ball in Journ. Bot.* 1873, 373).

Annua; caulis subsimplex in pedunculum nudum desinens; folia lineari-lanceolata, acuta, repando-dentata, superne vix decrescentia; involucri foliola 8–9, e basi lata ovata, longe acuminata, flores longitudine superantia, recurva, cum foliis et caule ciliato-pilosa; pedicelli cum calycibus glaberrimi; laciniæ calycinæ angustissimæ in setas capillaceas floribus æquilongas productæ; capitulum pro genere magnum.

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)! In collinis prov. Haha prope Mogador!

Mar. merid.—In prov. meridionalibus imper. Maroccani, sat frequens. Shedma! Ourika! Reraya! Mesfioua!

Species ex involucri foliolis cornuformibus insignis.

JASIONE ATLANTICA (*Ball in Journ. Bot.* 1873, 373).

Perennis; caules numerosi prostrati, ramis elongatis debilibus, sterilibus dense foliosis, floriferis superne nudis; folia obovato-linearia, obtusa, brevia; involucri foliola 12–13 ovata margine undulata, cum foliis et pedunculo glaberrima vel pube tenui leviter adspersa; pedicelli cum calycibus glaberrimi; laciniæ calycinæ breves vix quartam partem corollæ longitudinis attingentes.

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan! a 2000 m. ad 2500 m.

A. *J. amethystina*, Lag. et Rod., præter indumentum diversum, differt laciniis calycinis multo minoribus; sed forsan sicut hujus subspecies enumeranda.

CAMPANULA (*L. Gen.* 218).

C. DICHOTOMA (*L., DC. Pr.* vii. 462), = C. afra (*Cav. Anal. Cienc. Nat.* iii. 21).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Salli (*Broussonnet, ex Cav. loc. cit.*).

Mar. merid.—Valde frequens in regione inferiore. Legimus in provinciis Haha! Shedma! et Mtouga! et ad radices Atlantis Majoris ad Reraya! et Seksaoua! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. PARVIFLORA, = C. Kremeri (*Boiss. et Reut. Pug.* 75).

Mar. occid.—In monte Djebel Hadid! et juxta Aïn el Hadjar! haud procul Mogador.

Mar. merid.—In aridis juxta Mskala!

Inter specimina a nobis lecta nonnulla ambigua inter var. et formam normalem.

Ar. Geog. Regio Mediterranea occidentalis, imprimis calidior. Hispania austro-orientalis; Italia meridionalis. Africa borealis. In insulis Canariensibus obvia, deest in Madera. In Græcia erronee indicata. Var. nostra in Hispania et in Africa boreali obvia est.

C. MOLLIS (*L., DC. Pr.* vii. 463), = C. velutina (*Desf. Fl. Atl.* i. 180, tab. 51).

Mar. sept.—? Prope Tanger legit Broussonnet sec. Cavanilles (*Anal. Cienc. Nat.*).

Ar. Geog. Hispania australis. Imp. Maroccani dubia civis. Fertur in Creta, sed vix genuina.

A nemini recentiorum visa facile tamen in rupestribus Tingitanis invenienda. In promontorio Calpes hæc species crescit. Broussonnet plantam genuinam ibi legit, et forsan cum plantis Tingitanis commiscuit.

Campanula maroccana, *nobis.*

C. molli proxima, differt tamen notis plurimis non parvi momenti. Indumentum ex pilis rigidis hispidulum, nec velutino-pubescens; caules ex pilis rigidiusculis præsertim in striis elevatis e basi foliorum decurrentibus setosi; folia viridia, sæpius crenato-denticulata, superiora cum calyce sæpe glabrescentia; laciniæ calycinæ magis oblongæ apice obtusiusculæ, appendicibus reflexis tubo calycino longioribus; corolla basin versus contracta, paullo longior, fere ad medium fissa lobis lanceolatis; calyx fructifer quinquenervius, nervis in pedunculo decurrentibus.

Mar. merid.—Valde frequens ad radices Atlantis Majoris et in convallibus inferioribus. Mesfioua! Ourika! Aït Mesan usque 1600 m.! Seksaoua! Amsmiz! Milhaïn!

A *C. molli* ex forma calycis et corollæ diversa videtur probe distincta. An potius forma *C. filicaulis*, Coss. et Dur., sp. nondum descriptæ, cujus vidi spec. cultum in herb. Gay hodie Kewensi. Hæc tamen habet folia angustiora, et indumentum parcum videtur diversum.

C. Erinus (*L.*, *DC. Pr.* vii. 473).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Cap. Spartel! Tetuan (1851)

Mar. occid.—Prope Mogador!

Mar. merid.—Ad radices Atlantis Majoris, et alibi in regione inferiore. Mtouga! Aïn Tarsil! Visa etiam juxta Seksaoua! pr. Gurguri!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

C. Rapunculus (*L.*, *DC. Pr.* vii. 480).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (1851)!

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Mesfioua! Ourika! In convalle Aït Mesan usque 1600 m.!

—— ——, var. calyce strigoso,=C. verruculosa (*Link et Hffgg. Fl. Fort.* ii. 12, tab. 81).

Mar. sept.—Tanger! Djebel Dersa prope Tetuan (*Webb spec.*)!

Mar. occid.—Casa Blanca! Mazagan!

Ar. Geog. Species per Europam omnem (excl. arctica), in Sibiria Uralensi, in Oriente et in Africa boreali diffusa. Var., vix enumeratu digna, hinc inde in reg. Mediterranea occurrit.

C. Lœflingii (*Brot. Fl. Lus., et Phyt. Lus.* t. 18; *DC. Pr.* vii. 482), =C. erinoides (*Cav. Anal. Cienc. Nat.* iii. 20; *DC. Pr.* vii. 480, an *L.* ?),=C. Broussonnetiana (*R. et Sch. Syst.* v. 104),=C. Duriæi (*Boiss. Voy. Esp.* 401). Huc etiam referendæ sunt velut varietates *C. Matritensis* (A. DC. Mon. Camp. 332; DC. Pr. vii. 481) et *C. decumbens* (A. DC. Mon. Camp. 334; DC. Pr. vii. 431).

Mar. sept.—Prope Tanger legit Broussonnet teste Cavanilles loc. cit. Tetuan (1851)!

Mar. occid.—Casa Blanca! Prov. Haha prope Mogador! Prope Mogador (*Broussonnet, teste A. DC.*).

Mar. merid.—In regione inferiore, præsertim ad radices Atlantis Majoris. Prov. Shedma! Prope Seksaoua! Mzouda! Formam debilem paucifloram (*A. decumbens*, A. DC.) legimus in convalle Aït Mesan circ. 1800 m.

Ar. Geog. Peninsula Iberica. Marocco.

Planta valde ludibunda. Variat habitu, caule erecto vel decumbente plus minus folioso, ramis paucis vel numerosis, patulis vel substrictis, corolla majore vel minore; et formæ diversæ haud raro simul crescunt. Spec. Maroccana sæpius majora quam Hispanica, pedalia et ultra, habitu *Speculariam Speculum* referentia.

Huic proximæ sunt *C. ramosissima*, Sibth. et Sm., *C. Kotschyana* (A. DC. in Prod. vii. 481) et *C. phrygia* (Jaub. et Sp. Ill. Pl. Or. tab. 233), quæ forsan non satis diversæ sunt, et *C. specularioides* (Coss. Pl. Crit. 41).

SPECULARIA (*Heist. Syst. Pl. Gen.* 8).

S. FALCATA (*Ten. Prod. Fl. Neap.* 16, sub *Prismatocarpo*; *A. DC. Mon. Camp.* 345, *et Prod.* vii. 489).

Mar. merid.—Prope Amsmiz! In monte Djebel Tezah 1700–1800 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Verisimiliter huc referenda est *Campanula Speculum* (Schousb. Gew. Marok.), dum nemini recentiorum hæc novissima obvia fuit.

TRACHELIUM (*L. Gen.* 293).

T. CÆRULEUM (*L.*, *DC. Pr.* vii. 491; *Schousb. Gew. Marok.* 71).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Brouss sec. Cav*). Tetuan (1851)!

Mar. centr.—Prope Mequinez (*Schsb. l. c.*).

Mar. occid.—Prope Mogador (*Schsb. l. c.*).

Mar. merid.—Vidi plantam nondum florentem pr. Sheshaoua! et in distr. Mesfioua!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

T. ANGUSTIFOLIUM (*Schousb. Gew. Marok.* 72; *DC. Pr.* vii. 491).

Mar. centr.—Inter Mequinez et Fez (*Schsb. l. c.*).

Mar. merid.—Ad radices Atlantis Majoris et in convallibus calidioribus. Legimus in convalle Aït Mesan circ. 1400 m.! In rupibus supra Seksaoua 1000–1200 m.! et in rupibus Aïn Tarsil!

Ar. Geog. Species Maroccana.

Descriptio Schousbœana non accurata.

Radix perennis, crassa, lignosa, caules plurimos herbaceos erectos simplices foliaceos emittens; folia inferiora lineari-oblonga vel lineari-spathulata apicem versus denticulata, superiora angustiora, suprema angustissima; corymbus contractus; calycis parvuli laciniæ semimillimetrum longæ tubo subæquales; corolla demum valde elongata, tubo 10–12 millim. longo sæpius albido, laciniis 1½ millim. longis acutis, cæruleis; stylus glaberrimus, minus quam in *T. cæruleo* exsertus; stigma clavatum, demum trifidum (nec bifidum); capsula immatura certe trilocularis; semina in quovis loculo 3–4). Ex errore Schousbœi, qui se stigma bifidum vidisse credidit, cel. A. DeCandolle in Prodr. loc. cit. capsulam bilocularem descripsit.

ERICACEÆ (*Lindl. Nat. Syst.* 220).

CALLUNA (*Salisb. in Trans. Linn. Soc.* vi. 317).

C. VULGARIS (*L., et Schousb. Gew. Marok.* 174, sub *Erica*; *Salisb. l. c.*; *DC. Pr.* vii. 613).

Mar. sept.—In monte Djebel Kebir prope Tanger (*spec. ex herb. Schousb.*)! Tetuan!

Ar. Geog. Europa fere omnis a Scandinavia ad fretum Herculis. Asia Minor. Africa boreali-occidentalis. Versus orientem usque in Sibiriam Uralensem, et occidentem versus in insulas Islandiam et Terranovam se protendit.

ERICA (*L. Gen.* 192).

E. CILIARIS (*L., DC. Pr.* vii. 665).

Mar. sept.—Vidi folia in monte Djebel Kebir! spec. florifera ex herb. Schousboe prope Tanger lecta benev. comm. cel. Cosson!

Ar. Geog. Europa occidentalis ex Anglia usque fretum Herculis. Ditio Tingitana. Legi supra Algeciras.

E. AUSTRALIS (*L., DC. Pr.* vii. 666; *Schousb. Gew. Marok.* 175).

Mar. sept.—In monte Djebel Kebir prope Tanger! (*Schsb. l. c.*) (*Salzm. Exsicc.*)!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

E. UMBELLATA (*L., DC. Pr.* vii. 666).

Mar. sept.—In monte Djebel Kebir pr. Tanger! (*Salzm. Exsicc.*, sub *E. umbellifera*)! Inter Tetuan et Ceuta!

Ar. Geog. Peninsula Iberica. Africa Tingitana.

E. MULTIFLORA (*L., DC. Pr.* vii. 667).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Ar. Geog. Regio Mediterranea ex Dalmatia usque fretum Herculis. Deest in Lusitania et in Græcia; conf. Boissier (Fl. Or. iii. 971). Forma proxime affinis in Anglia et in Gallia occidentali obvia est.

E. ARBOREA (*L., DC. Pr.* vii. 690; *Schousb. Gew. Marok.* 176).

Mar. sept.—In monte Djebel Kebir prope Tanger! (*Schsb. l. c.*). Tetuan!

Ar. Geog. Regio fere omnis Mediterranea (inclusa Macaronesia); in Oriente minus frequens.

Erica scoparia (*L., DC. Pr.* vii. 692).

Mar. sept.—In monte Djebel Kebir pr. Tanger! Cap. Spartel! Tetuan!

Ar. Geog. Regio Mediterranea occidentalis ex Dalmatia usque Macaronesiam. Gallia occidentalis a Pyrenæis usque Ligerim flumen.

ARBUTUS (*L. Gen.* 552).

A. Unedo (*L., DC. Pr.* vii. 585).

Mar. sept.—Vidi prope Tanger!

Mar. occid.—Legimus prope Aïn el Hadjar haud procul Mogador!

Mar. merid.—In convalle Aït Mesan circ. 1400 m. legit J. D. H.!

Ar. Geog. Regio Mediterranea fere omnis, imprimis occidentalis (exclusa Madera). Adest etiam in Gallia occidentali et in Hibernia australi.

PLUMBAGINEÆ.

STATICE (*L. Gen.* 388).

S. sinuata (*L., DC. Pr.* xii. 635; *Schousb. Gew. Marok.*).

Mar. sept.—Tanger (*Schsb. l. c.*). Cap. Spartel! Inter Tetuan et Ceuta!

Mar. occid.—Mogador, *Lowe Cat.* (*Broussonnet, teste Cavanilles*). In provincia Haha haud procul Mogador!

Mar. merid.—Occurrit hinc inde in regione inferiore a mari remota. Prov. Shedma!

—— ——, var. **integrifolia** (var. β, *L., Boiss. in DC. Pr. l. c.*).

Mar. occid.—Casa Blanca! Specimina Maroccana in herb. DC. a Broussonnet lecta.

Ar. Geog. Species per regionem Mediterraneam (exclusa Macaronesia) late diffusa.

S. Beaumieriana (*Coss. MSS.*)?

Mar. merid.—Legi in glareosis torrentis Ouel en Fisk prope Gurguri frustulum *Statices* e grege *S. sinuatæ*, ab hac tamen diversæ, verisimiliter ad sp. novam Cossonianam referendæ!

Ar. Geog. Species propria Imp. Maroccani meridionalis.

S. Thouini (*Viv. Cat. H. di Negro*, 34; *DC. Pr.* xii. 636), = S. sinuata, var. γ (*L. Sp. Pl.* i. 397), = S. alata (*Willd. Enum. Hort. Berol. Suppl.* 15), = S. Ægyptiaca (*Pers. Syn., et Del. Fl. Eg.* tab. 25).

Mar. occid.—In arenosis a mari parum remotis prope Mogador! Prope Saffi! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Occurrit frequentissime in aridis saxosis regionis inferioris, imprimis in prov. Shedma! Ad radices Atlantis Majoris pr. Seksaoua!

Ar. Geog. Regio Mediterranea calidior. Africa borealis. Oriens. Græcia. Hispania australis. Fertur in Teneriffa (*fide spec. Broussonnetiano*) sed a recentioribus non visa.

STATICE MUCRONATA (*L. fil. Suppl.* 187; *DC. Pr.* xii. 639).

Mar. occid.—Sallé (*Broussonnet, ex Cav. Anal. Cienc. Nat.* iii. 38). Mazagan! Saffi! Mogador in arenosis et in insula! ubi eam olim legit Broussonnet (*teste Cavan. l. c.*) et postea Lowe et Balansa.

Ar. Geog. Species propria reg. litoralis Atlantici Imp. Maroccani.

Descriptio Boissieriana in DC. Pr. l. c. ex spec. incompletis haud omnino accurata. Folia radicalia late obovata vel sæpius suborbiculata in petiolum longum sensim attenuata. Ex planta in dumetis nascente (ut fere semper fit in ditione Mogadorensi) rami elati 2–3-pedales foliis carent, vel ex axillis squamarum fasciculos foliorum edunt (var. vel potius lusus a cel. Boissier memoratus); sed spec. humiliora quæ legi pr. Saffi et Mazagan in apricis enata gaudent ramis sterilibus foliaceis, foliis late orbicularibus in petiolum limbo æquilongum abrupte attenuatis. Alæ ramorum sæpissime, sed non semper, crispatæ. Sp. nostræ proxima est *S. pectinata,* Ait., floræ Canariensis civis; videtur tamen satis distincta.

S. OVALIFOLIA (*Poir. Dict. Suppl.* v. 237; *DC. Pr.* xii. 646), = S. auriculæfolia (*Brot. et Vahl, Symb.* pro parte), = S. mucosa (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Spec. Maroccana legit Broussonnet quoad loc. natalem dubia.

Ar. Geog. Habitat in litore occidentali Galliæ, in peninsula Iberica, in litore Maroccano, et in Macaronesia.

S. LYCHNIDIFOLIA (*Girard in Ann. Sc. Nat.* xvii. 18, tab. 3 A; *DC. Pr.* xii. 646).

Mar. sept.—Tetuan ad ostium fluminis (1851)! Tanger (*Salzm. Exsicc.,* sub *S. auriculæfolia*)!

Ar. Geog. Peninsula Iberica. Gallia occidentalis et australis. Africa Tingitana.

Spec. nostra ad var., seu potius formam, panicula confertiore (var. *β, corymbosa,* Boiss. in Prod. loc. cit.) referenda sunt.

S. OLEÆFOLIA (*Scop. Delic. Insubr.* i. 24, tab. 10), = S. auriculæfolia (*Vahl, Symb.* pro parte, et verisimiliter *Schousb. Gew. Marok.* 133), = S. Scopoliana (*Bertol. Fl. It.* iii. 528), = S. densiflora (*Guss. Prod. Fl. Sic. Suppl., non Girard*), = S. oxylepis (*Boiss. in DC. Pr.* xii. 647).

Mar. sept.—? Tanger (*Schsb. l. c.*) (*Broussonnet, teste Cav. Anal. Cienc. Nat.* iii. 40).

Mar. occid.—? Mogador (*Schsb. l. c.*).

Ar. Geog. Italia continentalis et insulæ. Africa boreali-occidentalis.

Floræ Maroccanæ dubia civis, dum synonyma Schousbœi et Cavanillesii incerta, et nemini recentiorum in litore Tingitano species obvia fuit. Cel. Boissier tamen spec. autoptica prope Oran lecta enumerat, et facile in territorio Maroccano confini invenienda erit.

Cel. Boissier nomen triviale Scopolianum antiquius et satis aptum mutavit, dum a Willdenovio, aliisque recentioribus, cum sp. alienis hoc confusum est. Pace tanti viri jus prioritatis illæsum manet.

STATICE OCCIDENTALIS (*Lloyd, Fl. Loire Inf.* 212; *DC. Pr.* xii. 648).
Mar. sept.—Tanger (*Durand, teste Boiss. in DC. Pr. l. c.*).
Ar. Geog. Litora Atlantica Europæ a Scotia usque Hispaniam borealem. Ditio Tingitana.

S. SPATHULATA (*Desf. Fl. Atl.* i. 275; *DC. Pr.* xii. 649), var. *β*, EMARGINATA (*Boiss. in Prod. l. c.*).
Mar. sept.—? Nondum florentem legi in maritimis inter Tetuan et Ceuta!
Ar. Geog. Species in litore Mediterraneo Africæ borealis; varietas ad Gibraltar et in ditione Tetuanensi obvia.
Ob spec. incompleta haud omnino certus sum de hac planta, quæ tamen spec. Calpensibus adamussim convenit.

S. GUMMIFERA (*Durieu in Boiss. et Reut. Pug.* 104), var. CORYMBULOSA (*Coss. Not. Crit.* 175; *Walp. Ann. Bot. Syst.* v. 716).
Mar. sept.—In insulis Zafarinis legit P. B. Webb, ex spec. in herb. nost.!
Ar. Geog. Species in Algeria prope Oran detecta; var. in Hispania austro-orientali et in ins. Maroccanis Zafarinis obvia.
Ex sect. *Limonio* adsunt *Statices* spec. duo mihi nimis incerta, nempe spec. incompletum nondum florens a me juxta Casa Blanca lectum, verisimiliter ad *S. delicatulam,* Girard referendum, alterum a cll. Rein et Fritsch prope Mazagan lectum, *S. lychnidifoliæ* subsimile, sed foliis apice non acuminatis diversum. Hujus gregis species plurimæ notis instabilibus dignoscendæ ad varietates vel subspecies reducendæ videntur.

S. ECHIOIDES (*L., DC. Pr.* xii. 665).
Mar. occid.—Frequens in saxosis prope Mogador a litore maris remotiusculis! Agadir (*Coll. Indig.* 1871)!
Ar. Geog. Regio Mediterranea imprimis litoralis, interdum in salsuginosis a mari remotis.

S. ORNATA, *nob.*,=S. læta (*Ball in Journ. Bot.* 1875, 176, *non Moris, Fl. Sard.* iii. 42).
Planta perennis, ex caudice lignoso caules vel scapos plurimos, erectos, 2–4-pedales, subaphyllos emittens; folia radicalia glabra, lanceolato-spathulata, obtusissima, in petiolum sensim attenuata, caulina (nonnisi in caulibus truncatis vel emorsis) radicalibus similia sed breviora, cætera ad squamas reducta; squamæ triangulares, parvæ, margine vix scariosæ; caules scapiformes teretes, in ramos strictos alternos dichotome divisi, subglaberrimi vel parce furfuracei; rami inferiores steriles abbreviati, superiores ramulosi, ramulis florigeris subarcuatim patentibus; spiculæ unifloræ vel rarius bifloræ, rectiusculæ, in spicas laxas uni-

laterales dispositæ; spicularum bracteæ subæquales minutæ, margine scariosæ, acutiusculæ; calyx profunde 5-costatus, tubo basi tantum bractea suffulto, limbo brevissimo ex dentibus quinque coloratis cuspidatis, versus basin scarioso-marginatis; corolla parva, pulchre roseopurpurea, tubo ex petalorum unguibus coalitis quam calyx sesquilongiore, limbo libero; filamenta tubo corollino ultra medium adnata; antheræ exsertæ; styli liberi.

Mar. merid.—Legimus ad ripas fl. Oued En Fys juxta Misra ben Kara!

Species distinctissima in § *Polyarthrion*, Boiss., collocanda, cui proxima est *St. cæsia*, Girard, Ann. Sc. Nat. ser. 3, vol. ii. p. 325; Boiss. in DC. Prod. xii. 667; et melius a Cosson (Notes sur qu. Pl. d'Espagne, p. 176) definita. Ab hac nostra differt bracteis spicularum æqualibus, nec suprema subquadruplo longiore, calycis limbi parte scariosa ad marginem angustum versus basin dentium reducta, petalorum unguibus in tubum coalitis, nec medium versus liberis, staminibus amplius adnatis, antheris exsertis.

STATICE FERULACEA (*L.,DC. Pr.* xii. 668; *Schousb.Gew. Marok.* 134).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)! (*Schsb. l. c.*). Tetuan ad ostium fluminis (1851)!

Mar. occid.—Casa Blanca (*J. D. H.*)! Mazagan (*R. et Fr. sp. in Herb. Kew.*)! Mogador (*Schsb. l. c.*).

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia).

ARMERIA (*Willd. Enum. H. Berol.* 333).

A. GADITANA (*Boiss. in DC. Pr.* xii. 675), var. TINGITANA, *nob.*,=A. tingitana (*Boiss. et Reut. Pug.* 102). Verisimiliter huc *Statice cephalotes* (Schousb. Gew. Marok. 132).

Mar. sept.—Legimus juxta Cap. Spartel, ubi jam legerant Boiss. et Reuter!

Ar. Geog. Peninsula Iberica austro-occidentalis. Var. nostra nonnisi in ditione Tingitana.

A. tingitana ab *A. gaditana* differt phyllis involucri latioribus, calycis calcari breviore, et pedicello paullo breviore. Hæ notæ mihi videntur nimis inconstantes. Quoad characteres a forma foveolæ basilaris desumptos vereor ne hi fallaces sint. In spec. authenticis *A. gaditanæ* video foveolas quoad formam valde ludibundas.

A. MAURITANICA (*Wallr. Monog. Arm.* 217; *DC. Pr.* xii. 676).

Mar. sept.—Inter Tetuan et Ceuta! Formam foliis angustioribus pr. Tetuan legit P. B. Webb (spec. sub "*A. alliacea*," ex herb. Webb)!

Mar. occid.—Casa Blanca!

Ar. Geog. Africa borealis. Varietas (*A. Welwitschii*, Boiss.) in Lusitania. Hæc est stirps variabilis. Involucri phylla interdum omnia mucronulata, interdum interiora mutica exteriora mucronulata, interdum (in spec. Algeriensibus a cel. Cosson determinatis) phylla fere omnia mutica, pauca externa debiliter mucronulata. Vidi semel crescentes formam foliis margine ciliolatis et formam f. glaberrimis donatam. Forsan ad formam angustifoliam referenda est *Statice alliacea* (Schousb. Gew. Marok. 131) in arenosis Tingitanis indicata.

ARMERIA PLANTAGINEA (*All. Fl. Ped.* ii. 90, sub *Statice*; *Willd. Enum. H. Berol.* 334; *DC. Pr.* xii. 683).

Mar. merid.—In regione media Atlantis Majoris. Legimus mox floribundam in monte Djebel Tezah a 2000 m. usque 2400 m.!

Ar. Geog. Europa media. Montes Hispaniæ, Lusitaniæ, Galliæ australis et Italiæ superioris.

Spec. nostra verisimiliter ad var. *leucantham* (Boiss. in DC. Pr. *l. c.*) referenda. Spec. altera nimis immatura, in convalle Aït Mesan circ. 2500 m. lecta, forsan potius ad *A. allioidem*, Boiss. tribuenda sunt.

LIMONIASTRUM (*Mœnch. Meth.* 423).

L. MONOPETALUM (*L., et Schousb. Gew. Marok.* 133, sub *Statice*; *Boiss. in DC. Pr.* xii. 689).

Mar. sept.—Tanger (*Schsb. l. c.*).

Mar. occid.—El Araisch (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea, exclusa Græcia, Oriente et Macaronesia.

PLUMBAGO (*L. Gen.* 213).

P. EUROPÆA (*L., DC. Pr.* xii. 691), = P. lapathifolia (*Schousb. Gew. Marok.* 67, *non Willd.*).

Mar. occid.—Casa Blanca! Saffi (*Schsb. l. c.*). Agadir (*Coll. Indig.*)!

Mar. merid.—In regione inferiore haud infrequens. Amsmiz! Milhaïn! Mtouga! Prov. Shedma (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

PRIMULACEÆ (*Vent. Tabl.* ii. 285).

CORIS (*L. Gen.* 243).

C. MONSPELIENSIS (*L., DC. Pr.* viii. 59; *Schousb. Gew. Marok.* 75).

Mar. sept.—Tetuan (1851)! Spec. a P. B. Webb lecta, verisimiliter etiam pr. Tetuan, in herb. Webb conservantur.

Mar. occid.—Prope Mogador! (*Balansa spec.* 1867)! In prov. Haha, verisim. haud procul Mogador (*Schsb. l. c.*). Prope Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Regio Mediterranea occidentalis a Sicilia et Algeria usque litora Atlantica Maroccana.

ASTEROLINUM (*Lk. et Hffgg. Fl. Port.* 333).

A. LINUM STELLATUM (*L.*, sub *Lysimachia*; *Lk. et Hffgg. l. c.*; *DC. Pr.* viii. 68).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir pr. Tanger!

Mar. merid.—In regione media et inferiore Atlantis Majoris. In convalle Amsmiz circ. 1400 m.! In monte Djebel Tezah usque 1800 m.! Distr. Reraya circ. 1200 m.!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

ANAGALLIS (*L. Gen.* 206).

A. ARVENSIS (*L.*, *DC. Pr.* viii. 69).

Mar. sept.—Tanger! (*Salzm. Exsicc.*, sub *A. parviflora*)! Tetuan (*Webb spec.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

—— ——, var. LATIFOLIA (*Lge. Pug.* 221; *Willk. et Lge. Fl. Hisp.* ii. 648), = A. latifolia (*L.*, *DC. Pr.* viii. 70; *Schousb. Gew. Marok.* 66).

Mar. sept.—In monte Djebel Kebir pr. Tanger! Cap. Spartel! Tetuan (*Webb spec.*, sub *A. cærulea*)!

Ar. Geog. Species per orbem fere totum (reg. glacialibus exclusis) diffusa. Varietas per reg. Mediterraneam, Indiam Orientalem et Americam australem dispersa.

A. latifoliam, nulla nota constante dignoscendam, ad var. cl. Lange optimo consilio reduxit. Tam hæc quam var. typica ludunt floribus phœniceis vel cæruleis.

A. LINIFOLIA (*L.*, *DC. Pr.* viii. 70; *Willk. et Lge. Fil. Hisp.* ii. 648), = A. Monelli (*Schousb. Gew. Marok.* et verisimiliter *L. Sp. Pl.* i. 211, excl. loc. nat. Verona).

Mar. sept.—Tetuan (*Webb Herb.*, sub *A. collina*)!

Mar. occid.—In agris prov. Haha (*Schsb. l. c.*). Huc verisimiliter spec. incompletum a me lectum in monte Djebel Hadid haud procul Mogador!

Mar. merid.—In convalle Aït Mesan circ. 1400 m.!

—— ——, var. MICROPHYLLA, *nob.* In convalle Aït Mesan supra Arround ad 2400 m. s. m.!

Forma insignis multicaulis radice suffrutescente, caulibus adscendentibus, foliis minimis lanceolatis, corollis quam in typo minoribus.

—— ——, var. COLLINA, *nob.* = A. collina (*Schousb. Gew. Marok.* 64; *DC. Pr.* viii. 70). Non differt nisi statura sæpius majore, caulibus crassioribus basi frutescentibus, pedicellis fructiferis longioribus, corolla rosea vel purpurascente, nec cærulea. In utraque forma foliola variant latiora vel angustiora.

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Spec. ex Herb. Schousb.*)!

Mar. occid.—Casa Blanca! Mazagan! Aïn el Hadjar, haud procul Mogador! Prov. Haha pr. Mogador! (*Schsb. l. c.*). Agadir (*Coll. Indig.* 1871)!

Specimina Tingitana, nisi colore florum, a forma latifolia *A. linifoliæ* Hispanicæ non distinguenda sunt. Confer Willk. et Lge. Fl. Hisp. ii. 649.

Ar. Geog. Tam *A. linifolia* quam *A. collina* peninsulæ Ibericæ et Africæ boreali-occidentalis cives sunt. *A. collina* in Sardinia a cel. Moris indicatur.

ANAGALLIS CRASSIFOLIA (*Thor. Chlor. Land.* 62; *DC. Pr.* viii. 70.)

Mar. sept.—In monte Djebel Kebir prope Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)!

Ar. Geog. In Gallia austro-occidentali, in peninsula Iberica et in agro Tingitano, ubique rarius obvia.

A. TENELLA (*L., DC. Pr.* viii. 71).

Mar. sept.—Cel. Cosson benevole comm. spec. a Schousboeo lecta! Ego semel vidi folia, sed spec. nulla legi!

Ar. Geog. Europa occidentalis. Africa boreali-occidentalis. Occurrit etiam (quod mirum) in insula Creta.

SAMOLUS (*L. Gen.* 222).

S. VALERANDI (*L., DC. Pr.* viii. 73; *Schousb. Gew. Marok.* 73).

Mar. sept.—Tetuan (1851)! "Ad fontes regionis Tingitanæ" (*Schousb. l. c.*).

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*). Juxta Aïn el Hadjar!

Ar. Geog. Species cosmopolita per orbem fere totum dispersa.

SAPOTACEÆ (*Juss. Gen.* 151).

ARGANIA (*R. et Sch. Syst.* iv. 502).

A. SIDEROXYLON (*R. et Sch. l. c.*; *DC. Pr.* viii. 187), = Sideroxylon spinosum (*L. Hort. Cliff.* 69; *ex A. DC. in Prod. l. c.*), = Elæodendron Argan (*Retz. Obs.* vi. 26; *Schousb. Gew. Marok.* 89).

Mar. occid.—Per zonam occidentalem Imperii Maroccani inter flumina Oumerbiah et Sous, et forsan, referentibus indigenis, usque fl. Oued. Noun. Prævalet in regione sublitorea usque 20 chilometra ab Oceano remota, sed sparsim occurrit in terris interioribus usque 40 chilometra a mari longinqua. Legimus jam florentem decedente Aprili!

Arbor diametro demum 3-4-pedali, ramis patentibus, vetusta altitudine sua latior. Incolis oleum subamarum ad ciborum condimentum usitatissimum et lignum grave durissimum suppeditat. Fusius de hac stirpe Floræ Maroccanæ cive insigni in Schousboei opere citato et in Jackson.

Ar. Geog. Unicum *Sapotacearum* genus extratropicale, nisi in territorio Maroccano nullibi visum.

OLEACEÆ (*Lindl. Nat. Syst.* 307).

JASMINUM (*L. Gen.* 17).

J. FRUTICANS (*L., DC. Pr.* viii. 313; *Schousb. Gew. Marok.* 2).

Mar. occid.—Mogador (*Lowe Cat.*). In monte Djebel Hadid haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In saxosis reg. inferioris Atlantis Majoris. Tasseremout! Aït Mesan usque 1400 m.! et alibi visum.

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

FRAXINUS (*L. Gen.* 1160).

F. OXYPHYLLA (*M. B. Fl. Taurico-cauc.* ii. 450; *DC. Pr.* viii. 276),= F. rostrata (*Guss. Pl. Rar.* 374, tab. 63; *DC. Pr. l. c.*),=F. australis (*auct. Gall.*; vix F. excelsior β, australis, *J. Gay in Camb. Enum. Bal.*).

Mar. sept.—Inter Tanger et Tetuan! Tetuan (*Webb Herb.*)!

Mar. merid.—Pluries visa in regione inferiore et ad radices Atlantis Majoris. Ourika! Reraya! In convalle Aït Mesan usque 1700 m.!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia). Regio Danubialis. Rossia australis.

Characteres quibus hæc a *F. excelsiore* separatur non graves; sed videntur satis constantes. Folia semper minora, subcoriacea, jugis paucioribus, pinnis acutioribus; samaræ angustiores, semper integræ, dum in *F. excelsiore* sæpius emarginatæ sunt. Pro subspecie enumeranda?

F. DIMORPHA (*Coss. et Dur. in Bull. Soc. Bot. Fr.* ii. 367).

Mar. merid.—In convalle Ourika circ. 1000 m.! In convalle Aït Mesan (spec. foliis tantum donatum legit J. D. H.)!

Planta singularis in statu dumetoso sterili a nobis visa pro *Fraxino* difficile habenda. Rami debiles 2–3-pedales erecti, folia parvula, foliola variant ovata acuta vel suborbicularia obtusa.

PHILLYREA (*L. Gen.* 19).

P. LATIFOLIA (*L., DC. Pr.* viii. 292; *Schousb. Gew. Marok.* 3).

Mar. sept.—In monte Djebel Kebir pr. Tanger! (*Schsb. l. c.*). In monte Beni Hosmar prope Tetuan (*J. D. H.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

P. MEDIA (*L., DC. Pr.* viii. 292; *Schousb. Gew. Marok.* 2).

Mar. occid.—Prope Mogador (*Lowe Cat.*), (*Schsb. l. c.*). In monte Djebel Hadid haud procul Mogador!

Mar. merid.—Pluries visa ad radices Atlantis Majoris. Ourika (*J. D. H.*)!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

P. ANGUSTIFOLIA (*L., DC. Pr.* viii. 292).

Mar. sept.—In monte Djebel Kebir prope Tanger!

Hæc species a beato Lowe indicatur dubitative (signo interrogationis) prope Mogador; forsan errore aliquo, dum nemini in hac ditione obvia fuit.

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

OLEA (*L. Gen.* 20).

O. EUROPÆA (*L.*, *DC. Pr.* viii. 284; *Schousb. Gew. Marok.* 3).

Mar. sept.—Frequens in ditione Tingitana; sæpius culta, sed in collibus saxosis facta spontanea et forsan indigena!

Mar. centr.—Circa Mequinez et Fez (*Schousb. l. c.*).

Mar. occid.—Frequens in regione inferiore. In monte Djebel Hadid prope Mogador videtur spontanea!

Mar. merid.—Colitur hinc inde in regione inferiore et in omnibus convallibus Atlantis Majoris usque 1500–1600 m. Interdum facta spontanea forma fruticosa spinosa in rupestribus obvia est!

Ar. Geog. Arbor diu culta, verisimiliter in Africa boreali et in Oriente indigena, hodie facta spontanea in calidioribus totius regionis Mediterraneæ.

APOCYNACEÆ (*Lindl. Nat. Syst.* 299).

VINCA (*L. Gen.* 295).

V. MEDIA (*Lk. et Hffgg. Fl. Port.* tab. 90; *DC. Pr.* viii. 384), = V. major (*Schousb. Gew. Marok.* 106, non *L.*).

Mar. sept.—Frequens in sepibus et dumetis pr. Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*).

Ar. Geog. Peninsula Iberica. Italia meridionalis. Sardinia. Africa borealis.

NERIUM (*L. Gen.* 181).

N. OLEANDER (*L.*, *DC. Pr.* viii. 420; *Schousb. Gew. Marok.* 106).

Mar. sept.—Ad ripas fluminum prope Tanger (*Schousb. l. c.*). Inter Tanger et Tetuan, et prope Tetuan a nobis visum!

Mar. occid.—Prope Mogador (*Lowe Cat.*). Prov. Haha haud procul Mogador!

Mar. merid.—Ad radices Atlantis Majoris et in convallibus inferioribus, fere semper ad ripas torrentium. Amsmiz! In convalle Aït Mesan et alibi usque 1500 m. observatum! Rarius occurrit in planitie. Secus rivulum ad fines prov. Haha et Shedma!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

ASCLEPIADEÆ (*R. Br. in Wern. Trans.* i. 12).

PERIPLOCA (*L. Gen.* 300).

P. LÆVIGATA (*Ait. H. Kew.* i. 301; *DC. Pr.* viii. 498), = P. angustifolia (*Labill. Pl. Syr. Dec.* ii. 13, tab. 7; *Schousb. Gew. Marok.* 106).

Mar. occid.—Prope Mogador! (*Lowe Cat.*), (*Schsb. l. c.*). Magis frequens circa Aïn el Hadjar! et in parte inferiore montis Djebel Hadid!

Ar. Geog. Species late diffusa sed nullibi frequens. In Syria maritima semel legit Labillardière. In Lampedusa cæterisque insulis minoribus inter Siciliam et oras Africanas, et in Hispania austro-orientali rarius occurrit. Adest in Africa boreali, et in ins. Canariensibus; deest tamen in Madera.

GOMPHOCARPUS (*R. Br. in Wern. Trans.* i. 37).

G. FRUTICOSUS (*L.*, sub *Asclepiade*; *R. Br. loc. cit.*; *DC. Pr.* viii. 557).

Mar. sept.—Prope Tanger spontaneus sed vix indigenus! Tetuan (*Webb spec.*)!

Ar. Geog. Fertur ex Arabia (ubi certe indigenus) per regionem Mediterraneam Europæ calidiorem et per Africam fere totam iter fecisse usque in insulas Canarienses et in Madagascar.

Inter plantas a beato Webb in Mauritania lectas video specimen ad *Gymnema subvolubile* (Decne. in Ann. Sc. Nat. ix. 277, et in DC. Pr. viii. 621) referendum. Hæc est species per Africam tropicam occidentalem late diffusa, sed a nemini in Imp. Maroccano observata, et vix indigena.

BOUCEROSIA (*Wight et Arn. in Contr. Bot. Ind.* 34).

B. MAROCCANA (*Hook. fil. in Bot. Mag.* c. 6137), = Stapelia quadrangula (*Schousb. Gew. Marok.* 107, *non Forsk.*).

"Ramis tetragonis marginibus angulato-sinuatis, foliis trulliformibus acutis, corollæ lobis nudis tubo intus hirsuto, coronæ stamineæ processubus quinque incurvis gynostegio incumbentibus cum decem erectis geminatim collateralibus capitatis alternantibus."

Mar. occid.—Legimus in insula Mogador! ubi olim legit Schousboe, et in regione litorali prov. Haha!

Mar. merid.—Videtur satis frequens in regione inferiore usque radices Atlantis Majoris. Ourika! Milhaïn! Mtouga! et alibi visa.

Proxime affinis *B. Gussonianæ* (Mikan in N. Ac. Nat. Cur. xvii. 594, tab. 41, et Decne. in DC. Pr. viii. 649, sub *Apteranthe*) quacum eam confudimus donec flores ex plantis in Angliam allatis vidit cel. J. D. Hooker et notas diagnosticas loc. cit. indicavit. Planta nostra differt ramorum costis in lobos triangulares elevatis, nec sinuato-undulatis, folio in apice cujusvis lobi trulliformi basin versus contracto, sæpius deflexo, nec sessili basi adnato adscendente. Flores pauciores longius pedicellati, corollæ lobis brevioribus minus reflexis, nudis nec, ut in *B. Gussoniana*, ciliatis. Coronæ stamineæ structura diversa. Lobi exteriores per paria cum interioribus quinque incumbentibus alternantes in sp. nostra longitudine subæquales erecti, dum in *B. Gussoniana* ad globulos sessiles reducti sunt. Qui sententiam celebb. Benth. et H. fil. genus *Apteranthem* cum *Boucerosia* conjungendum esse ægre tulit, ex planta nostra edoctus facile consentiet.

GENTIANEÆ (*Juss. Gen.* 141).

MICROCALA (*Lk. et Hffgg. Fl. Port.* i. 359).

M. FILIFORMIS (*L.*, sub *Gentiana*; *Willd. Sp. Pl.* i. 633, *et Schousb. Gew. Marok.* 47, sub *Exaco*; *Lk. et Hffgg. l. c.*; *DC. Pr.* ix. 62).

Mar. sept.—Prope Tanger in subhumidis montis Djebel Kebir (*Schsb. l. c.*).

Ar. Geog. Europa occidentalis ex Lapponia usque fretum Herculis. In Europa Mediterranea infrequens. In Græcia olim a Sibthorp lecta; prope Byzantium unico loco nascitur (*ex Boiss. Fl. Or.*).

CHLORA (*L. Gen.* 1258).

C. PERFOLIATA (*L.*, *DC. Pr.* ix. 69; *Schousb. Gew. Marok.* 172).

Mar. sept.—Rarius occurrit in ditione Tingitana (*Schsb. l. c.*). In monte Beni Hosmar nondum florens, forsan ad var. sequentem referenda !

Mar. merid.—Ad radices Atlantis Majoris. Prope Ourika ! Mesfioua (*J. D. H.*)! Tasseremout (*J. D. H.*) ! Prov. Mtouga (*R. et Fr. spec. in Herb. Kew.*) !

Ar. Geog. Europa occidentalis. Regio omnis Mediterranea (exclusa Macaronesia).

—— ——, var. MASCARIENSIS (*Desf. Fl. Atl.* i. 327), = C. grandiflora (*Viv. Cors. App. Alt.* 4).

Mar. sept.—Prope Tetuan (1851) ! (*Webb Herb.*) !

Ar. Geog. Africa borealis. Corsica. Sardinia.

Hæc forma forsan sicut subspecies enumeranda est. Videtur satis constans, caulibus tenuioribus, cyma laxiore, corollæ duplo majoris segmentis basi transverse rugosis distinguenda.

C. IMPERFOLIATA (*L. fil. Suppl.* 218; *DC. Pr.* ix. 69).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *C. crenulata*) ! (*spec. ex Herb. Schousboe*) !

Ar. Geog. Hispania. Gallia meridionalis. Ager Tingitanus. Ins. Canarienses.

ERYTHRÆA (*Rich. in Pers. Syn.* i. 283).

E. RAMOSISSIMA (*Vill. Dauph.* ii. 380, sub *Gentiana*; *Rich. in Pers. Syn.* i. 283; *DC. Pr.* ix. 57), = Gentiana Centaurium, var. β (*L. Sp. Pl.* i. 333), = Chironia erythræa (*Schousb. Gew. Marok.* 81).

Mar. sept.—Prope Tanger ! In dumetis montis Djebel Kebir (*Schsb. l. c.*). Prope Tetuan (1851) ! Ad ripas fluminis Tetuanensis (1851) !

Mar. occid.—Prope Mogador (*J. D. H.*) !

Mar. merid.—Mesfioua ! Inter Sektana et Frouga (*G. Maw*) ! Spec. ex Oasi Akka a Mardochæo lectum benev. comm. cel. Cosson !

Ar. Geog. Europa occidentalis et centralis. Regio omnis Mediterranea inclusa Madera, sed (?) exclusis ins. Canariensibus. Adest etiam in Asia temperata.

Species variabilis, quæ, nisi fallor, includit *E. pulchellam*, Fl. Dan., *E. latifoliam*, Sm., *E. tenuifloram*, Link, aliasque s. d. species Orientales. Synonymon Schousboeanum ob diagnosin mancam incertum.

ERYTHRÆA CENTAURIUM (*L.*, sub *Gentiana*; *Pers. Syn.* i. 283; *DC. Pr.* ix. 58), = Chironia Centaurium (*Schousb. Gew. Marok.* 81).

Mar. sept.—Juxta Cap. Spartel!

Mar. occid.—Casa Blanca! Prope Mazagan visa! Mogador (*Lowe Cat.*). Aïn el Hadjar! et in monte Djebel Hadid haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In prov. Shedma (*J. D. H.*)! Mesfioua! Milhaïn!

—— ——, var. SUFFRUTICOSA (*Griseb. Mon. Gent.* 140, *et in DC. Pr.* ix. 70), = Chironia suffruticosa (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir! In monte Djebel Dersa prope Tetuan (*Webb spec.*)!

Ar. Geog. Species per Europam mediam et regionem omnem Mediterraneam (exclusa Madera) late diffusa; var. in Hispania et in Africa boreali.

Stirps quam maxime ludibunda, in plurimas species et varietates ab auctoribus dilaniata notis inconstantibus definitas. Inutile duco varietates ex florum magnitudine vel ex foliorum forma enumerare, dum formæ intermediæ passim obviæ sunt.

E. SPICATA (*L.*, sub *Gentiana*; *Pers. Syn.* i. 283; *DC. Pr.* ix. 60), = Chironia spicata (*Schousb. Gew. Marok.* 86).

Mar. sept.—Tanger (*Schsb. l. c. spec. comm. Coss.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Regio fere omnis Mediterranea; in Madera deest.

E. MARITIMA (*L.*, sub *Gentiana*; *Pers. Syn.* i. 283; *DC. Pr.* ix. 60), = Chironia maritima (*Willd. Sp. Pl.* i. 1069; *Schousb. Gew. Marok.* 85).

Mar. sept.—In aridis montis Djebel Kebir pr. Tanger (*Schsb. l. c. spec. comm. Cosson*)!

Ar. Geog. Habitat in maritimis fere omnis reg. Mediterraneæ (inclusa Macaronesia) et in Gallia occidentali et in Persia boreali.

CICENDIA (*Adans. Fam. Pl.* ii. 503).

C. PUSILLA (*Lam. Dict.* ii. 645, sub *Gentiana*; *DC. Fl. Fr.* iii. 663, sub *Exaco*; *Griseb. Mon. Gent.* 156, *et in DC. Pr.* ix. 61).

Mar. sept.—? Legi hanc sp. facile prætervisam in herbosis subhumidis prope S. Roque haud procul Gibraltar, et ex notula MS. (nescio quanam auctoritate allata) ipsam in agro Tingitano obviam esse credo. Specimina Tingitana nulla vidi. Planta ulterius inquirenda.

Ar. Geog. Gallia media et occidentalis. Hispania borealis et centralis, et verisimiliter in utroque litore freti Herculis. In Italia media et in Sardinia etiam obvia.

BORAGINEÆ (*Juss. Gen.* 128)*.

HELIOTROPIUM (*L. Gen.* 179).

H. SUPINUM (*L., DC. Pr.* ix. 533).
Mar. sept.—Tanger (*Salzm. Exsicc.*), *ex DC. Pr. l. c.*
Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Africa tropica et (?) australis. Formæ proxime affines in India orientali.

H. EUROPÆUM (*L., DC. Pr.* ix. 534; *Schousb. Gew. Marok.* 59).
Mar. sept.—Tanger (*Salzm. Exsicc.*)!
Mar. occid.—Casa Blanca (*R. et Fr. spec. in Herb. Kew.*)! Mazagan!
Mar. merid.—In prov. Shedma! et alibi visum loco non notato.
Ar. Geog. Per regionem omnem Mediterraneam diffusum. In Europa media, forsan introductum.

H. UNDULATUM (*Vahl, Symb.* i. 13; *DC. Pr.* ix. 536; *Schousb. Gew. Marok.* 60), = H. crispum (*Desf. Fl. Atl.* i. 151, tab. 41), = H. maroccanum (*Lehm. Asper.* 56; *DC. Pr. l. c.*).
Mar. occid.—In arenosis prope Mogador! ubi olim legerunt Broussonnet et Schousboe, et postea Balansa, ex spec. in herb. nost.
Ar. Geog. Africa borealis ex Mare Rubro ad Oceanum, sed potius infrequens. Africa tropica (Sennaar, Senegal). Palæstina.
H. maroccanum, Lehm., videtur esse nil nisi var. levis *H. undulati* caulibus erectis et foliis aliquantulum latioribus. Sp. nostræ proxime affine, etsi in genere *Heliophyto* a Candolleo enumeratum, est *H. erosum* (Lehm. Asper. 54), stirps Canariensis et Senegalensis.

CYNOGLOSSUM (*L. Gen.* 183).

C. DIOSCORIDIS (*Vill. Dauph.* ii. 457; *DC. Pr.* x. 147), var. NEBRODENSE (*Guss. Prod. Fl. Sic.* i. 216; *DC. Pr.* x. 148).
Mar. merid.—In umbrosis juxta Sheshaoua! In convalle Ourika! In convalle Aït Mesan! Reraya (*R. et Fr. spec. in Herb. Kew.*).
Ar. Geog. Typus speciei Villarsianæ est forma septentrionalis in Gallia, Pedemontio et Hispania septentrionali potius rara. Varietas nostra per reg. Mediterraneam calidiorem late diffusa est, in Hispania, Sicilia, Africa boreali, et Oriente obvia.
Specimina nostra, in convalle Aït Mesan ad circ. 1500 m. lecta, sunt typo Gussoniano conformia, alia, quæ in eadem valle supra Arround circ. 2200 m. legimus, differunt statura pumila 8–12-pollicari, nuculis facie læviusculis parce glochidiato-aculeatis.

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* Normam Linnæanam scribendi—scil. *Borago* potius quam *Borrago*—secutus sum.

C. nebrodense, consentiente cel. Boissier, nullis notis gravioribus a *C. Dioscoridis* distinguendum est.

CYNOGLOSSUM PICTUM (*Ait. Hort. Kew.* i. 179; *DC. Pr.* x. 147).

Mar. sept.—Videtur frequens in ditione Tingitana. Tanger (*Webb Herb.*)! In monte Djebel Kebir! Tetuan (1851)! Inter Tetuan et Ceuta!

Mar. occid.—? Folia fere certe huc referenda prope Agadir lecta attulerunt Coll. Indigeni (1871)!

Mar. merid.—Sheshaoua! Mesfioua (*J. D. H.*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

C. CLANDESTINUM (*Desf. Fl. Atl.* i. 159, tab. 42; *DC. Pr.* x. 148).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea occidentalis a Sicilia usque fretum Herculis. Deest in Macaronesia et in Gallia australi.

In hac specie haud raro pedicelli plurimi bracteati. Ambigua igitur est inter sectiones a celeb. De Candolle stabilitas. Corolla extus villosa facile dignoscitur.

C. CHEIRIFOLIUM (*L.*, *DC. Pr.* x. 154).

Mar. occid.—Prope Agadir (*Coll. Indig.* 1871).

Mar. merid.—Haud infrequens in saxosis aridis regionis inferioris et ad radices Atlantis Majoris. Prope Aïn Oumast! Mesfioua! Ourika!

Ar. Geog. Regio omnis Mediterranea occidentalis ab insula Melita usque Lusitaniam. Deest in Macaronesia et in Italia nisi meridionali.

—— ——, var. HETEROCARPUM (*Kunze, Chlor. Austro-Hisp.* p. 49), =C. arundanum (*Coss. Not. Crit.* 41).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Ar. Geog. Hispania australis. Montes Tetuanenses.

Primo intuitu var. nostra satis differt tomento niveo crassiore et nuculis facie superiore læviusculis centro parce echinatis. Hæ notæ tamen variabiles sunt, nec desunt formæ intermediæ. Video nuculas *C. cheirifolii* in spec. nostris et Hispanicis valde ludibundas. Planta in aridissimis enata gaudet nuculis facie externa excavatis margine elevato, et cum spinis brevibus crassis basi conicis. In spec. alteris spinæ disci pauciores et tenuiores, marginales divergentes basi quasi confluentes. Stylus in utraque forma tenuis longitudine variabilis.

ECHINOSPERMUM (*Swartz in Lehm. Asper.* 113).

E. BARBATUM (*M. B. Fl. Taurico-cauc.* i. 421, sub *Myosotide*; *Lehm. Asper.* 128; *DC. Pr.* x. 137), var. BREVISTYLUM, *nob.*

Mar. merid.—Ad radices Atlantis Majoris in distr. Reraya haud procul Moulai Ibrahim!

Ar. Geog. Species orientalis ab India boreali-occidentali per Persiam et

Asiam Minorem usque Bulgariam, Rossiam australem et Sibiriam Uralensem dispersa. In Syria et Arabia etiam obvia. Spec. Africana præter nostra nulla vidi.

Spec. nostra varietati *E. cariensi*, Boiss., simillima, sed fructus structura ad typum Lehmannianum potius referenda; nec video discrimen nisi stylos in pl. nostra breviores.

ROCHELIA (*Rchb. in Flora*, 1824, p. 243).

R. STELLULATA (*Rchb. Fl. Excurs.* 346; *DC. Pr.* x. 176), = Lithospermum dispermum (*L. Sp. Pl.* 191).

Mar. merid.—In convalle Aït Mesan circ. 1300 m.! In convalle Amsmiz ad 1400 m.!

Ar. Geog. Species imprimis orientalis ex India boreali-occidentali per Persiam et Asiam Minorem et Syriam usque in Europam austro-orientalem diffusa. In Hispania centrali et in Algeria interiore et in Imp. Maroccano hinc inde, sed rarius, obvia est.

BORAGO (*L. Gen.* 188).

B. OFFICINALIS (*L., DC. Pr.* x. 35).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (*Webb Herb.*)! Vidi prope Tetuan sed spec. nulla servavi.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Europa media haud infrequens sed verisimiliter introducta.

ANCHUSA (*L. Gen.* 182).

A. UNDULATA (*L., DC. Pr.* x. 44).

Mar. merid.—Tetuan (1851)! (*Webb spec.*)!

Ar. Geog. Per regionem Mediterraneam fere omnem (exclusa Macaronesia) sparsim occurrit.

A. MACROPHYLLA (*Lam. Ill.* no. 1816; *Desf. Fl. Atl.* i. 156; *DC. Pr.* x. 46).

Nascitur in Imperio Maroccano sec. Desfontaines (loc. cit.), sed a nemini recentiorum visa.

A. ITALICA (*Retz. Obs.* i. 12; *DC. Pr.* x. 47; *Schousb. Gew. Marok.* 61).

Mar. sept.—Tanger! (*Schsb. l. c.*). Vidi etiam prope Tetuan!

Mar. merid.—Rarius occurrit in arvis regionis inferioris, forsan introducta. Mesfioua (*J. D. H.*)! Reraya (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio fere omnis Mediterranea (inclusa Macaronesia). In calidioribus Europæ mediæ etiam obvia.

A. ATLANTICA (*Ball in Journ. Bot.* 1873, 373).

Radix biennis; caulis erectus, simplex, foliosus; folia lanceolata, inferiora in petiolum latum attenuata, superiora sessilia, semiamplexicaulia; inflorescentia composita, ex racemis in axillis fol. superiorum ortis; corolla regularis, ochroleuca (in spec. nostris), hexamera; stylus inclusus; germen (immaturum) læve.

Mar. merid.—In regionis mediæ Atlantis Majoris convalle Aït Mesan a 1900 m. ad 2000 m.!

Ob fructum immaturum planta nostra quoad genus haud omnino certa; habitus tamen *Anchusæ*, nullæ proxime affinis nisi forte spec. Abyssinicæ *A. affini*, R. Br. Planta tota molliter hispida; indumentum biforme ex pilis brevibus aliis longioribus patulis intermixtis.

NONNEA (*Medik. Phil. Bot.* i. 31).

N. NIGRICANS (*Lam. Dict.* iii. 627 (edit. Padov.), sub *Lycopside*; *DC. Fl. Fr.* iii. 626, *et Prod.* x. 31), = Echioides nigricans (*Dsf. Fl. Atl.* i. 163), = Anchusa nigricans (*Brot. Fl. Lus.* i. 298).

Mar. occid.—Casa Blanca!

Mar. merid.—Prope Gurguri (*J. D. H.*)! Prope Amsmiz!

Ar. Geog. Peninsula Iberica. Sicilia. Africa boreali-occidentalis.

Huic nimis proxima est *N. violacea* (Dsf. l. c., sub *Echioide*) quæ pro varietate tantum enumeranda videtur.

Speciem nostram, ut taceam de scriptoribus antiquis, Lamarck primus descripsit ex pl. in Hort. Paris. culta.

N. PHANERANTHERA (*Viv. Fl. Lib. Spec.* 9, tab. 1; *DC. Pr.* x. 33).

Mar. occid.—Mazagan! Saffi! Mogador! (*Brouss., sec. DC. Pr. l. c.*)!

Ar. Geog. Africa borealis a Cyrenaica usque oras Atlanticas.

Huc verisimiliter referenda est *Lycopsis ciliata* (Schousb. Gew. Marok. 61) in arenosis pr. Mogador indicata. *L. ciliata* (Willd. Sp. Pl. i. 780) a Schousb. citata, monente cel. Boissier, est *Nonnea lutea*, Rchb., species orientalis, nec in peninsula Iberica nec in Algeria (quoad sciam) hucusque detecta.

MYOSOTIS (*L. Gen.* 180).

M. LINGULATA (*Lehm. Asper.* 110; *Rchb. Ic. Fl. Germ.* xviii. tab. 120), = M. cæspitosa (*Schultz, Fl. Starg. Suppl.* 11; *DC. Pr.* x. 105), var. FOLIOSA. Racemis elongatis insigniter foliaceis.

Mar. sept.—In uliginosis montis Djebel Kebir pr. Tanger meridiem versus!

Ar. Geog. Species per Europam omnem nisi arcticam, et regionem fere omnem Mediterraneam (exclusis ins. Canariensibus) late diffusa, et usque in Asiam temperatam et Americam borealem provecta.

M. SYLVATICA (*Hoffm. Deutschl. Fl.* i. 85; *DC. Pr.* x. 107).

Mar. merid.—In monte Djebel Tezah a 2000 m. usque 3000 m.!

—— ——, var. ALPESTRIS (*Koch, Syn. Fl. Germ.* 581), = M. alpestris (*Schmidt, Fl. Boh.* iii. 26).

Mar. merid.—In convalle Aït Mesan supra Arround, et in ascensu ad jugum Tagherot, a 2200 m. usque 3200 m.!

Ar. Geog. Species per Europam fere omnem et per montes regionis Mediterraneæ late diffusa, in Asia media et America boreali non deest. Forma montana (*M. alpestris*) in editioribus magis frequens.

Flores in spec. nostris minores quam in Europæis.

MYOSOTIS HISPIDA (*Schlecht. in Mag. Nat. Berl.* viii. 229; *DC. Pr.* x. 108).

Mar. sept.—Tanger! In monte Beni Hosmar prope Tetuan!

Mar. merid.—In regione media et superiore Atlantis Majoris. In convalle Aït Mesan et in jugo Tagherot a 2100 m. usque 3000 m.!

Ar. Geog. Europa fere omnis. Regio Mediterranea (inclusa Macaronesia).

Spec. ex Atlante variant pedicellis brevissimis, et interdum *M. uncatæ,* Boiss., simillima sunt.

M. VERSICOLOR (*Rchb. Fl. Excurs.* i. 341; *DC. Pr.* x. 109).

Mar. sept.—? Tanger (*Salzm. Exsicc.*). Vidi specimen Salzmannianum in herb. J. Gay; utrum ex ditione Tingitana haud certissimus sum.

Ar. Geog. In Europa occidentali frequens, fit rarior orientem versus. Nascitur in insulis Canariensibus et Azoricis, sed deest in reg. Mediterranea orientali.

M. STRICTA (*Link, Enum. H. Berol.* i. 161; *DC. Pr.* x. 109).

Mar. merid.—Legi in convalle Aït Mesan circ. 2100 m.! In monte Djebel Tezah circ. 2200 m.!

Ar. Geog. Europa fere omnis, imprimis orientalis. In Oriente frequens, deest in Græcia et in Italia inferiore. In Hispania centrali obvia, desideratur in Lusitania et in Macaronesia. Spec. Africana (nostris exceptis) nondum vidi.

LITHOSPERMUM (*L. Gen.* 181).

L. ARVENSE (*L., DC. Pr.* x. 74).

Mar. sept.—Prope Tetuan!

Mar. merid.—In convalle Aït Mesan circ. 2100 m.!

Ar. Geog. In temperatis orbis veteris ex Hibernia usque Japoniam indigena species, in America introducta est. Adest in ins. Canariensibus.

L. incrassatum (*Guss. Ind. Sem.* 1826, 6; *DC. Pr.* x. 74).

Mar. merid.—Ad radices et in regione superiore Atlantis Majoris. Tasseremout! In convalle Amsmiz circ. 1400 m.! In convalle Aït Mesan supra 2200 m.! In jugo Tagherot usque 3200 m.! In monte Djebel Tezah circ. 3000 m.

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

Stirps variabilis, interdum erecta ramis strictis, vel diffusis adscendentibus, vel in editioribus omnino prostrata ramis debilibus. Ut mihi videtur hæc est proles australis *L. arvensis,* a quo parum differt pedicellis incrassatis et nuculis paullo minus tuberculatis. Inter spec. nostra nonnulla valde accedunt ad *L. Splitbergeri,* Guss. Flores tamen semper pallide cærulei.

LITHOSPERMUM APULUM (*L.,* sub *Myositide*; *Vahl, Symb.* ii. 32; *DC. Pr.* x. 75; *Schousb. Gew. Marok.* 60).

Mar. sept.—Tanger (*Webb Herb.*)! (*Schsb. l. c.*). In regione collina inter Tanger et Tetuan! Prope Tetuan!

Mar. merid.—Ad radices et in reg. inferiore Atlantis Majoris. Tasseremout! Amsmiz! Seksaoua! In convalle Aït Mesan circ. 1400 m.!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

L. MICROSPERMUM (*Boiss. Diagn. Pl. Or.* ser. 2, iii. 135),=Rhytispermum apulum (*Webb, Phyt. Can.* iii. 51, *et in Bourgeau, Plant. Canar.* No. 328, *non Link*),=Lithospermum arvense, var. cærulescens (*Bourgeau, Pl. Canar.* No. 318),=L. Webbii (*Coss. et Dur. MSS., Coss. Cat. Pl. Maroc. in Bull. Soc. Bot. Fr.* xxii. 23, sine descriptione).

Mar. occid.—In insula Mogador, ubi hanc sp. jam legerat cl. Balansa!

Ar. Geog. Insulæ Canarienses. Ditio Mogadorensis.

Hoc mihi videtur valde proximum *L. apulo,* et forsan sicut subspecies enumerandum.

Caules rigidi, interdum perennantes. Nuculæ fere ut in *L. apulo.*

L. FRUTICOSUM (*L., DC. Pr.* x. 80).

Mar. sept.—Tanger, in monte Djebel Kebir! (*Salzm. Exsicc.,* sub *L. ericetorum*)!

Ar. Geog. Peninsula Iberica. Gallia occidentalis et australis. Ditio Tingitana. Species proxime affines, *L. hispidulum* (Sibth. & Sm. Fl. Gr. tab. 162), et *L. rosmarinifolium* (Ten. Fl. Nap. iii. 178), in Oriente et in Italia meridionali.

L. prostratum (Lois. Fl. Gall. i. 105; DC. Pr. x. 81) est mera forma, nec vera varietas, hujus sp. valde ludibundæ. Dignoscitur ramis prostratis et corolla extus pubescente. Re vera *L. fruticosum* ludit caule ramoso, ramis strictis vel adscendentibus vel prostratis, et corolla extus glabra plus minusve pubescente. Specimina Tingitana plerumque ambigua sunt, habitu *L. fruticosi* sed corolla pubescente *L. prostrati.*

ECHIUM (*L. Gen.* 191).

E. TUBERCULATUM (*Lk. et Hffgg. Fl. Port.* i. 183; *DC. Pr.* x. 19), =E. pustulatum (*Lehm. Asper.* 448; *Rchb. Icones,* xviii. 1299; *Boiss. Fl. Or.* iv. 206; *vix Sibth. et Sm. Fl. Gr.* tab. 180).

Mar. sept.—Prope Tanger! Inter Tanger et Tetuan! Tetuan (1851)!

Ar. Geog. Per Europam australem, imprimis occidentalem hinc inde dispersum. Huc specimina ex Dalmatia (Unio, Itineraria, 1829) et teste Boiss. ex insula Zacyntho. Adest in Africa boreali-occidentali, sed deest in Oriente et in Macaronesia.

Planta, quæ mihi videtur proles australis *E. vulgaris* et sicut subspecies enumeranda, satis variabilis est. Hujus varietas, nisi fallor, est *E. Gaditanum* (Boiss. Voy. Esp. 422). *E. pustulatum*, Fl. Gr. mihi videtur species diversa, propior *E. Rauwolfii*, Delile, nuculis læviusculis lucentibus et indumento rigidiore a pl. nostra dignoscenda.

ECHIUM ANGUSTIFOLIUM (*Lam. Ill.* No. 1856; *DC. Pr.* x. 20)?

Mar. sept.—Prope Tanger legi florens et fructiferum die 13 Junii!

Ar. Geog. De hac specie et ejus distributione geographica nil affirmare audeo. Verisimiliter reg. Mediterranea occidentalis.

Planta nostra proxima est *E. angustifolio*, Coss. in Bourgeau, Pl. d'Espagne, No. 384, 989, et 1625, a cl. Willkomm ad *E. creticum*, L., relato; sed gaudet laciniis calycinis longioribus valde inæqualibus, qua nota ab *E. plantagineo* etiam distinguitur.

E. SERICEUM (*Vahl, Symb.* 35; *DC. Pr.* x. 21; *Boiss. Fl. Or.* iv. 207), var. DIFFUSUM (*Boiss. l. c.*),=E. diffusum (*Sibth. et Sm. Fl. Gr.* ii. 69, tab. 182; *DC. Pr.* x. 23).

Mar. merid.—Specimen unicum in itinere inter Shedma et Mogador lectum comm. cl. G. Maw!

Ar. Geog. Species regionis Mediterraneæ, imprimis orientalis civis, inde per Africam borealem omnem diffusa. In Europa nonnisi in Græcia et Italia australi detecta.

Spec. nostrum plantæ ex prov. Oran (Bourgeau, Pl. d'Algérie, 1856, No. 74) sat bene conveniens, differt, ut videtur, corollis paullo minoribus, staminibus parum exsertis.

E. sericeum est species variabilis, et formæ quas cel. Boissier (loc. cit.) huc retulit aspectu valde diversæ. Huic valde, et forsan nimis, proximum est *E. setosum* (Vahl, Symb. ii. 32; DC. Pr. x. 21), quocum cel. Cosson adunavit *E. humile* (Desf. Fl. Atl. i. 165), species perennis (vel biennis) caule inferne lignoso, staminibus longiuscule exsertis. *E. setosum* (Boiss. Fl. Or. iv. 209, et Del. Fl. Eg. tab. 17. fig. 2), est certe species diversa, annua, staminibus inclusis, stylo bifido lobis apice capitulatis; =*E. verecundum*, Viv., sec. Boissier, l. c.

E. PLANTAGINEUM (*L., DC. Pr.* x. 20),=E. violaceum (*auct., an L.? Schousb. Gew. Marok.* 61).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*). Prope Cap. Spartel!

Mar. occid.—Casa Blanca!

Mar. merid.—Distr. Mesfioua, haud procul urbem Marocco!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Gallia occidentalis.

—— ——, var. GRANDIFLORUM (*DC. Pr. l. c.*),=E. grandiflorum (*Desf. Fl. Atl.* i. 168, tab. 45).

Mar. sept.—Tanger in maritimis! Pr. Cap. Spartel! Tetuan (*Webb Herb.*)!

Ar. Geog. Occurrit hinc inde in reg. Mediterranea.

ECHIUM LONGIFOLIUM (*Del. Fl. Eg.* 40, tab. 16; *DC. Pr.* x. 23).

Mar. merid.—? Frustulum inter Tasseremout et Ourika lectum comm. cl. G. Maw!

Ob spec. incompletum de hac specie haud certus sum. A typo vix differt nisi corollæ tubo rubro lobis violascentibus.

—— ——, var. MAROCCANUM, *nob.* Differt a typo indumento rigidiore, floribus minoribus versicoloribus. Planta annua (vel interdum biennis); caulis sæpius erectus vel e basi ramosus, ramis diffusis; indumentum strigosum; stamina subexserta; styli lobi apice capitulati, nuculæ majusculæ, tetragono-conicæ, profunde rugoso-tuberculatæ.

Forma aspectu inter typum et *E. Rauwolfii* (Del. Fl. Eg. 51, tab. 19) media. Hoc tamen differt nuculis nitidis obsolete tuberculatis.

Mar. occid.—Prope Mogador frustulum legi! Prope Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Videtur satis frequens in aridis apricis regionis inferioris. Prov. Shedma pr. Aïn Oumast! Mesfioua! Amsmiz! Milhain! Huc etiam spec. incompletum ex Mtouga (*R. et Fr. spec. in Herb. Kew.*)?

Ar. Geog. E. longifolium Ægypti, Nubiæ, et Arabiæ Petrææ civis est. Var. nostra nonnisi Maroccana videtur.

E. MODESTUM (*Ball in Journ. Bot.* 1873, 373).

Radix annua, tenuis; caulis erectus, tenuis, spithamæus, parce ramosus; folia lineari-oblonga, acutiuscula, pube brevi setis patulis longioribus intermixta vestita; inflorescentia scorpioidea subsimplex, rarius ramosa; bracteæ parvulæ calyce hirsuto breviores; corolla cærulea, pubescens, calyce duplo longior; antheræ parum exsertæ; stylus bifidus lobis apice capitulatis; nuculæ pyramidatæ costatæ, parce et vix tuberculatæ.

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Frequens in aridis regionis inferioris. Aïn Oumast et alibi in pr. Shedma! Mesfioua! Mtouga! Seksaoua!

Echio nullo nisi *E. maritimo* comparandum. Ab hoc differt statura humili, caule tenuiore, indumento patente magis hispido, staminibus exsertis (nec inclusis) et præsertim nuculis costatis nec dorso rotundatis. *E. maritimum* est sæpius bienne vel perenne et anno secundo ramos diffusos longiusculos e basi caulis edit.

ECHIUM MARITIMUM (*Willd. Sp. Pl.* i. 788; *DC. Pr.* x. 23), = E. micranthum (*Schousb. Gew. Marok.* 62).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (1851)! (*Webb spec.*)!

Mar. occid.—Casa Blanca! Prov. Haha pr. Mogador! Mogador (*Lowe Cat.*). In arvis prov. Haha rarissime (*Schsb. l. c.*).

Spec. nostra ex prov. Haha formam parvifloram hujus speciei sistunt, et procul dubio ad *E. micranthum*, Schsb., referenda sunt.

Ar. Geog. Regio Mediterranea occidentalis ex Sicilia usque litora Atlantica. Deest in Macaronesia.

E. FLAVUM (*Desf. Fl. Atl.* i. 165, tab. 45; *Boiss. Voy. Esp.* 424), = E. Fontanesii (*DC. Pr.* x. 24).

Mar. sept.—Tetuan (*Webb spec.*)!

Ar. Geog. Hispania. Africa boreali-occidentalis.

E. POMPONIUM (*Boiss. Diagn. Pl. Or.* ser. i. 1, 93; *Voy. Esp.* tab. 124).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *E. italico*)! Spec. ex herb. Schousboe comm. cel. Cosson!

Ar. Geog. Hispania. Africa boreali-occidentalis.

CERINTHE (*L. Gen.* 186).

C. MAJOR (*Lam. Dict.* iv. 67; *L., ex parte*; *Schousb. Gew. Marok.* 61), = C. aspera (*Roth, Catal. Bot.* i. 33; *DC. Pr.* x. 3).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*). Cap. Spartel! Inter Tetuan et Ceuta!

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Regio Mediterranea, imprimis occidentalis (exclusa Macaronesia). In Asia Mediterranea nonnisi in insulis et in agro Byzantino obvia.

—— ——, var. GYMNANDRA, = C. gymnandra (*Gasparr. in Rend. Accad. Sc. Nat.* i. 72).

Mar. sept.—Ad ostium fluminis Tetuanensium (1851)! In monte Beni Hosmar pr. Tetuan!

Ar. Geog. Italia australis. Africa borealis.

CONVOLVULACEÆ (*Juss.* 132).

CALYSTEGIA (*R. Br. Prodr.* 483).

C. SOLDANELLA (*L.*, sub *Convolvulo*; *R. Br. l. c.*; *Choisy in DC. Pr.* ix. 433).

Mar. occid.—In arenosis prope Mogador legit Broussonnet teste Cavanilles (*Anal. Cienc. Nat.* iii. 17).

Ar. Geog. Species amphigea in litoribus Europæ occidentalis et regionis Mediterraneæ (incluso Mari Caspio) obvia, in Macaronesia tamen non indicata; inde in litoribus temperatis Oceani Pacifici, scil. Australiæ, Novæ Zealandiæ, ins. Norfolk, Americæ australis et Californiæ dispersa. Ex Japonia spec. non vidi.

CALYSTEGIA SEPIUM (*L., et Schousb. Gew. Mar.*, sub *Convolvulo*; *R. Br. Prodr.* 483; *DC. Pr.* ix. 433).

Mar. sept.—Tanger! Tetuan (1851)!

Ar. Geog. In temperatis orbis veteris late diffusa, inde in America boreali et australi et in Australasia dispersa. Spec. ex Macaronesia nulla vidi.

Spec. nostra intermedia sunt, sed propiora *C. sylvaticæ* (W. K. Pl. Rar. Hung. iii. 390, tab. 264, sub *Convolvulo*; Choisy in DC. Pr. ix. 433). Hæc tamen est mera varietas *C. sepium*; et formæ intermediæ præsertim in Italia sæpe occurrunt. Dignoscitur floribus majoribus, bracteis amplioribus magis patentibus obtusioribus. Folia variant basi cordata—auriculis rotundatis vel angulatis—vel sagittato-hastata.

CONVOLVULUS (*L. Gen.* 215).

C. CANTABRICA (*L., DC. Pr.* ix. 402).

Mar. merid.—Ad radices et in regione inferiore Atlantis Majoris. In convalle Amsmiz usque 1400 m.! In convalle Aït Mesan circ. 1300 m.! Prope Seksaoua!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). Habitat etiam in calidioribus Europæ mediæ.

C. TRICOLOR (*L., DC. Pr.* ix. 405).

Mar. sept.—Tanger! Cap. Spartel! Tetuan (1851)!

Ar. Geog. Regio Mediterranea occidentalis a Sicilia usque Lusitaniam, et dit. Tingitanam. Deest in Macaronesia, necnon in Italia media et superiore.

C. UNDULATUS (*Cav. Icon.* iii. 39, tab. 277; *DC. Pr.* ix. 405), = C. evolvuloides (*Dsf. Fl. Atl.* i. 176, tab. 49, *et Sibth. et Sm. Fl. Gr.* tab. 198).

Mar. sept.—Tanger (*Broussonnet ex Cavan. in Anal. de Cienc. Nat.*).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In convalle Aït Mesan 1400–1500 m.!

Ar. Geog. Hispania centralis et australis. Liguria. Sicilia. Africa borealis.

Spec. ex Agadir allatum maximum, caules plurimos prostratos pedales et ultra e collo radicis emittens; ex his prodeunt rami axillares, omnes cum caulibus flores plurimos subcapitato-congestos apice ferentes. Corolla extus glabra; capsula immatura villosa, matura glabrescens; semina 1–2 in quovis loculo ex rugis prominentibus asperula.

C. ARVENSIS (*L., DC. Pr.* ix. 406; *Schousb. Gew. Marok.* 69).

Mar. sept.—Tanger! Tetuan (1851)!

Mar. merid.—In umbrosis irrigatis prope Sheshaoua!

Ar. Geog. Planta cosmopolita per totum orbem (exceptis terris arcticis) diffusa.

C. SABATIUS (*Viv. Nov. Sp. Diagn. in calce Fl. Lib. Spec.* 67; *Rchb. Fl. Excurs.* no. 2386; *Bert. Fl. It.* ii. 442; *Moggr. Contrib. Fl. Ment.* tab. 61), var. ATLANTICUS, *nob.*

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan usque 2100 m.!

Ar. Geog. *C. sabatius* nonnisi in Liguria litorali rarius occurrit. Varietas vel subspecies *C. mauritanicus,* Boiss., in Algeria; var. nostra denique in Atlante Majore.

Pluribus notis planta nostra inter *C. sabatium* et *C. mauritanicum* (Boiss. Voy. Esp. 418, tab. 122) media est. Affinitatem proximam inter hos beatus Moggridge jampridem indicavit. Notæ quibus pl. nostra a typo recedit non gravis momenti. Ex radice lignosa prodeunt caules plurimi tenues prostrati vel adscendentes, a spithama ad sesquipedem longi; folia parva ovalia vel subrotunda, basi truncata, breviter petiolata, cum caule pilis mollibus patentibus obsita; pedunculi axillares plerumque uniflori, rarius biflori, bracteis duabus lineari-lanceolatis medium versus instructi, dum biflori pedunculus alter nudus bracteolatus exit. Corolla pallide cærulea fauce ochroleuca, nec violacea ut in *C. sabatio,* nec in plicis rosea ut in *C. mauritanico,* sed in plicarum dorso pubescens; capsula glaberrima. Monente b. Moggridge planta spontanea in horto culta fit plus minusve scandens, et ex notula cl. G. Maw *C. mauritanicus* ex seminibus Algeriensibus enatus in horto ramos debiliter scandentes edit. In hoc segmenta calycina majora et magis foliacea quam in pl. spontanea. Cl. Choisy in DC. Pr. ix. 407, *C. sabatium* ad varietatem *C. pseudosiculi,* Cav., perperam reduxit. Hæc novissima est species omnino diversa, et meo sensu nil nisi varietas levis *C. siculi,* pedunculis bifloris, bracteis sæpe (non semper) a calyce remotioribus distinguenda. Hujus vidi specimina Algeriensia Canariensibus omnino conformia, et verisimiliter in ditione nostra invenienda sunt, sed hucusque nulla vidi.

CONVOLVULUS SICULUS (*L.,DC. Pr.* ix. 407; *Schousb.Gew.Marok.* 70). Vulgaris in toto territorio Maroccano nobis noto.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan!

Mar. occid.—Prope Mogador (*Broussonnet ex Cavan. in Anal. Cienc. Nat.*) et in parum remoto monte Djebel Hadid! Prov. Haha haud procul Mogador! (*Schsb. l. c.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In regione inferiore passim occurrit, et in Atlante Majore non deest. Shedma! Seksaoua! Mtouga! In monte Djebel Tezah usque 1800 m.! Alibi pluries visa!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). Deest in Asia continentali.

C. ALTHÆOIDES (*L., DC. Pr.* ix. 409; *Schousb. Gew. Marok.* 69).

Mar. sept.—Tanger! (*Schsb. l. c.*).

Mar. occid.—In monte Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Satis frequens in regione inferiore, etiam in saxosis aridissimis. Ain Oumast! Mesfioua! In convalle Aït Mesan usque 1400 m.! Seksaoua! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

CUSCUTA (*L. Gen.* 170).

C. PLANIFLORA (*Ten. Syll.* 128; *Fl. Nap.* tab. 220; *Engelm. Cusc. Sp.* 14),=C. europæa, var. epithymum (*Schousb. Gew. Marok.* 59).

Mar. sept.—Cap. Spartel (*Schsb. l. c.*).

Mar. occid.—? Agadir (*Coll. Indig.* 1871)!

Mar. merid.—? Prov. Shedma! Mesfioua! Misra Ben Kara! et verisimiliter eadem species per provincias meridionales a nobis percursas ubique communis.

Cuscutarum species et varietates in sicco extricare vix audeo, sed opere Engelmanniano edoctus parum dubito quin *Cuscutæ* supra citatæ omnes ad *C. planifloram* (sensu latiore) referendæ sint. Specimina tamen prope Casa Blanca in foliis *Asphodeli* cujusdam lecta mihi videntur diversa, corollæ lobis longioribus acutioribus, et staminibus longioribus insignia. Monente Engelmann *Cuscutæ* indigenæ Canarienses—*C. epithymum*, *C. episonchum* et *C. epiplocamum*, Phyt. Canariensis omnes ad *C. planifloram* reducendæ sunt.

Ar. Geog. *C. planiflora* per regionem omnem Mediterraneam late diffusa est.

SOLANACEÆ (*Bartl. Ort. Nat.* 193).

SOLANUM (*L. Gen.* 251).

S. NIGRUM (*L.*, *DC. Pr.* xiii. pars 1, 50).

Mar. sept.—Tanger!

Mar. occid.—? Vidi prope Casa Blanca et Mazagan spec. verisimiliter ad typum referenda!

—— ——, var. MINIATUM, *M. K.*,=S. miniatum (*Bernh. in Willd. Enum.* 236; *Dunal in DC. Pr. l. c.* 56).

Mar. merid.—Sheshaoua!

—— ——, var. HUMILE,=S. humile (*Bernh. in Willd. l. c.*; *Dun. in DC. Pr. l. c.*).

Mar. occid.—Mogador (*Lowe Cat.*).

—— ——, var. SUFFRUTICOSUM, = S. suffruticosum (*Schousb. in Willd. Enum.* 1236; *Dunal in DC. Pr. l. c.* 53).

Mar. occid.—In prov. Haha haud procul Mogador! Planta a Schousbœo Willdenovio communicata verisimiliter ex agro Mogadorensi.

Ar. Geog. Species cosmopolita per totum orbem terrarum in temperatis et calidioribus, vestigia hominum secuta. Var. *suffruticosum* in subtropicis et tropicis orbis veteris occurrit.

S. villosum (*Lam. Dict.* iv. 289; *Dunal in DC. Pr.* xiii. pars 1, 58).

Mar. merid.—In ruderatis urbis Marocco!

Ar. Geog. Europa media et australis. Regio Mediterranea (inclusa Macaronesia). America australis.

S. nigro proxime affine. Pro subspecie licet dubitative enumeravi.

SOLANUM SODOMÆUM (*L., DC. Pr.* xiii. pars 1, 366).

Mar. sept.—Prope Tanger infrequens et forsan introductum!

Ar. Geog. In calidioribus regionis Mediterraneæ occidentalis. Deest in Gallia, in Italia superiore et in ins. Canariensibus. Varietas in Africa australi, ut videtur, indigena, necnon in Australia et in insula Mauritii.

WITHANIA (*Pauq. Diss. de Bellad. ex Dunal in DC. Prod.*).

W. SOMNIFERA (*L.*, sub *Physalide*; *Dunal in DC. Pr.* xiii. pars 1, 453).

Mar. merid.—In ruderatis et hortis urbis Marocco! Inter Frouga et Sheshaoua legit G. Maw!

Ar. Geog. Regio Mediterranea calidior (inclusis ins. Canariensibus). India Orientalis. Africa orientalis et australis. Deest in Gallia, in Italia continentali et in Madera.

W. FRUTESCENS (*L., et Schousb. Gew. Marok.* 79 sub *Atropa*; *Pauq. Diss. de Bellad.*; *Dunal in DC. Pr.* xiii. pars 1, 457).

Mar. occid.—Casa Blanca! In dumetis prope Mogador (*Schsb. l. c.*).

Mar. merid.—Frequens in regione inferiore et rarius occurrit ad radices Atlantis Majoris. Prov. Haha! Prov. Shedma! Reraya usque 1000 m.! Inter Frouga et Sheshaoua (*G. Maw*)!

Stirps aspectu variabilis. Interdum frutex 4–8-pedalis, foliis magnis suborbicularibus, interdum fruticulus foliis ovatis vix pollicem longis, et inter hos formæ intermediæ non desunt.

Ar. Geog. Hispania. Marocco. Insulæ Canarienses.

LYCIUM (*L. Gen.* 262).

L. VULGARE (*Dunal in DC. Pr.* xiii. pars 1, 509), = L. barbarum (*L., Sp. Pl.* ed. 2, *nec* ed. 1, *sec. Dunal*).

Mar. sept.—Vidi in sepibus prope Tanger, forsan introductum!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Pluries visum, sed semper in cultis vel prope pagos incolarum. Sheshaoua! Ourika!

Ar. Geog. Verisimiliter ex Oriente in Europam et Africam borealem allatum. Frequens in sepibus Europæ mediæ et regionis Mediterraneæ, sed vix spontaneum.

L. AFRUM (*L., Dunal in DC. Pr.* xiii. pars 1, 521).

Mar. occid.—? Legi fructiferum prope Saffi 9 Junii 1871! Eandem speciem, nisi fallor, vidi prope Mazagan!

Ar. Geog. Sponte nascitur in Hispania (ubi rarum), in Oriente, in Africa australi, et (teste Rchb. fil.) in insulis Canariensibus.

Ex speciminibus incompletis planta nostra admodum incerta. Arbuscula humilis intricata, ramis brevibus, ex gemmis foliaceis in axillis foliorum delapsorum nodosis, baccis ovalibus solitariis pendulis.

LYCIUM MEDITERRANEUM (*Dunal in DC. Pr.* xiii. pars 1, 523);=L. europæum (*L., Schousb. Gew. Marok.* 80), nomen improprium a Dunal mutatum.

Mar. occid.—In insula Mogador! In collinis pr. Haha prope Mogador! (*Schsb. l. c.*).

Ar. Geog. Africa borealis. Oriens. Græcia. Macaronesia. Europæ australis dubia civis, sed sæpe introductum et hodie spontaneum.

Baccæ secundum auctores rarissime inveniuntur. In insula Mogador planta a locustis denudata baccas maturas oblongo-ovoideas saturate aurantiacas frequentes edit.

MANDRAGORA (*Juss. Gen.* 125).

M. OFFICINARUM (*L. Sp. Pl.* ed. 1, 181; *Dunal in DC. Pr.* xiii. pars 1, 466),=Atropa Mandragora (*L. Sp. Pl.* ed. 2, 259).

Mar. sept.—Prope Tanger folia visa! (*Salzm. Exsicc.*)! (*Blackmore, spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia). Deest in Gallia et in Italia superiore.

DATURA (*L. Gen.* 246).

D. STRAMONIUM (*L., Dunal in DC. Pr.* xiii. pars 1, 540).

Mar. sept.—Vidi in ruderatis circa Tanger!

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Ex America boreali dicitur oriunda; hodie per totam Europam calidiorem, regionem omnem Mediterraneam, et Americam australem facta est spontanea.

HYOSCYAMUS (*L. Gen.* 247).

H. ALBUS (*L., Dunal in DC. Pr.* xiii. pars 1, 548; *Schousb. Gew. Marok.* 78).

Mar. sept.—Tetuan (1851)!

Mar. merid.—Prov. Haha (*Schsb. l. c.*). In ruderatis urbis Marocco! In convalle Aït Mesan circ. 2000 m.!

—— ——, var. MAJOR (*L. Sp. Pl.* ed. 2, 257),=H. majore (*Mill. Dict.*; *Dunal in DC. Pr.* xiii. pars 1, 548).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Species per regionem Mediterraneam diffusa. Var. in Oriente, Africa boreali et Macaronesia obvia.

SCROPHULARINEÆ (*R. Br. Prodr.* 433).

VERBASCUM (*L. Gen.* 245).

V. CALYCINUM (*Ball in Journ. Bot.* 1875, 172).

Planta tota albo-floccosa; caulis florifer fere bipedalis, subsimplex vel breviter ramosus; folia inferiora obovato-acuta, in petiolum attenuata, caulina sessilia, superiora angustiora, floralia lanceolato-linearia, omnia, vel saltem inferiora, glomerulos florales superantia; flores fasciculati pedicellati, pedicellis calycem subæquantibus; calycis segmenta oblongo-linearia, pro genere longissima, capsulam ovoideam sat magnam æquantia vel superantia; stamina inæqualia; filamenta purpureo-barbata. Ab affinibus (§ *Thapsoidea*, Benth. in DC. Prod.) calyce et foliorum forma bene distincta.

Mar. merid.—Ad radices Atlantis Majoris pr. Sektana! In convalle Aït Mesan circ. 1400 m.! Tamarat (*R. et Fr. spec. in Herb. Kew.*)!

VERBASCUM SINUATUM (*L.*, *DC. Pr.* x. 234; *Schousb. Gew. Marok.* 78).

Mar. sept.—Tanger! (*Schsb. l. c.*).

Mar. occid.—Mogador (*Lowe Cat.*). Aïn el Hadjar haud procul Mogador!

Mar. merid.—Videtur haud infrequens in regione inferiore. In ruderatis urbis Marocco! prope Ourika! et alibi visum!

Ar. Geog. Per regionem omnem Mediterraneam (inclusa Macaronesia) late diffusum.

V. COSSONIANUM, *nobis*.

Elatum; inflorescentia racemoso-paniculata; folia crassa utrinque pannoso-tomentosa, nervis in pagina inferiore prominulis, radicalia obverse oblongo-lanceolata in petiolum brevissimum sensim attenuata, margine leviter sinuata, caulina oblongo-lanceolata sessilia, basi subcordata, margine denticulata, superiora latiora abbreviata longiuscule acuminata; panicula magna (3-pedalis) subpyramidata; flores in fasciculis laxis pauci, 3–4, brevissime pedicellati; calycis segmenta oblonga breviuscula; corolla sat magna extus tomentosula; filamenta lanata; capsula?

Mar. merid.—In provincia Mtouga prope castellum gubernatoris florens 29 Maji!

In grege *V. speciosi*, Schrad., juxta *V. sinaiticum* (Benth. in DC. Pr. x. 236) collocandum. Ab hoc differt foliis crassioribus subtus insigniter nervosis, caulinis integris, floribus subsessilibus in fasciculis paucioribus, calycibus minoribus. Primo intuitu habui pro *V. granatensi*, Boiss. Hoc differt tamen foliis radicalibus et infimis profunde sinuato-crenatis, nervis subtus non prominentibus, floribus pedicellatis, calycis laciniis triangulari-ovatis. Pl. nostræ valde affine est frustulum fructiferum ab indigeno Mardochæo ad Tazeroualt lectum, a cel. Cosson benevole communicatum, sub "*V. pycnostachyum*, Coss. MSS." non Boiss. et Held. in Diagn. Pl. Or. Hoc verisimiliter ad sp. nostram referendum est.

V. LYCHNITIS (*Schousb. Gew. Marok.* 77; *an L.*?).

"In locis sterilibus siccis raro" (*Schsb. l. c.*). Præter Schousboe nemo hanc sp. in ditione nostra vidit. In Hispania australi a Willk. et Lange non indicatur, et floræ Maroccanæ dubia civis videtur.

Ar. Geog. Europa media. Regio Mediterranea præsertim orientalis. Deest in Macaronesia.

VERBASCUM HÆNSELERI (*Boiss. Voy. Esp.* 442; *Benth. in DC. Pr.* x. 239).

Mar. merid.—In distr. Reraya specimen unicum legit cel. J. D. Hooker!

Ar. Geog. Hispania centralis et australis. Atlas Major. Pl. nostra spec. Bourgæanis ex Sierra de Huescar et prope Riopar lectis bene congruit. Folia infima late ovata in petiolum abrupte angustata.

V. HOOKERIANUM, *nob.*,=Verbascum, nov. sp.? (*Ball in Journ. Bot.* 1875, 172).

Descriptio ex specimine unico a cel. J. D. Hooker lecto in regione inferiore Atlantis Majoris. Bienne (?), caulis bipedalis, ramoso-paniculatus; folia dense pannosa, tomento flavo obtecta, nervis in pagina inferiore valde prominulis, inferiora elliptico-lanceolata in petiolum longiusculum attenuata, caulina sessilia ovata acutiuscula; flores parvi; calycis segmenta abbreviata ex tomento detersibili interdum virescentia, capsula ovato-conica obtusa dimidio breviora; stamina inæqualia.

Mar. merid.—In convalle Ourika!

Plantæ nostræ proximum est *V. Ternacha*, Hochst. in A. Richard Tent. Fl. Abyss. ii. 108. Hoc tamen ostendit stamina multo breviora subæqualia, et capsulam ovoideam et vix cum sp. Maroccana conjungendum videtur; sed in hoc genere ratio specierum valde incerta. Cel. Bentham in DC. Prod. vol. x., citat *V. Jernacha*, Hochst. (ex MS. Hochstetteriano?), et dubitative—dum flores non vidit—sub *V. phlomoide* collocavit.

CELSIA (*L. Gen.* 312).

C. CRETICA (*L. fil. Suppl.* 281; *DC. Pr.* x. 244), var. CAVANILLESII (*Willk. in Fl. Hisp.* ii. 545),=C. sinuata (*Cavan. in Anal. Cienc. Nat.* iii. 68),=C. Cavanillesii (*Kunze, Chlor. Austro-Hisp.* No. 536).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *C. cretica*)!

Mar. occid.—Videtur satis frequens in regione sublitorali. Casa Blanca! Mazagan! Mogador! Agadir (*Coll. Indig.* 1871)!

Hæc planta, forsan melius pro subspecie sub *C. sinuata*, Cav., enumeranda, differt pluribus notis, et, nisi fallor, aream geographicam propriam habitat. *C. cretica* genuina insularum Cretæ, Sardiniæ, et Siciliæ, necnon Algeriæ civis, gaudet caule simplici, floribus sessilibus in spicam laxam foliosam dispositis, foliis superioribus in bracteas floribus sublongiores abeuntibus. Hujus capsulam maturam non vidi. Stirps nostra Maroccana habet caulem ramis nonnullis brevibus instructum, vel sæpe ex caule primario læso prodeunt rami plurimi erecti subæquales. Flores in racemis laxis magis distantes, pedicellis erecto-patulis, demum crassis, calyci subæqualibus, bracteas breves foliaceas superantibus fulcrati. Folia primaria cito marcescentia, pinnatipartita, lobis subæqualibus rotundato-sinuatis, dum in *C. cretica* genuina sunt lyrato-pinnatifida. Capsula in pl. nostra sat magna ovato-conica vel ovato-globosa.

Huc specimina omnia Hispanica et Maroccana et Canariensia quæ vidi sub "*C. cretica*." *C. laciniata* (Coss. in Balansa, 'Pl. d'Algérie,' no. 954) ex Biskra videtur etiam huc referenda. Folia gaudent lobis acutiusculis; sed a foliis laciniato-pinnatifidis pl. Poiretianæ diversa sunt; cætera omnia ut in pl. nostra, nisi herba minus pubescenti-viscosa. Semina in spec. nostris superficie intertexta aulæiformia, majora quam in sp. affinibus.

CELSIA BARNADESII (*Vahl, Symb.* ii. 39, sub *Verbasco*; *Don, Dict.* iv. 499; *Willk. et Lge. Fl. Hisp.* ii. 545),=C. laciniata (*Poir. Dict. Suppl.* ii. 147; *Benth. in DC. Pr.* x. 244),=C. pinnatifida (*Boiss. et Reut. Diagn. Pl. Hisp.* 22).

Mar. sept.—? Tanger (*Broussonnet in herb. Gouan*)? !

Ar. Geog. Species rara et paucis cognita. In Hispania centrali a Barnades et postea a Prolongo et Reuta detecta. Specimen in herb. Gouan a Broussonnet lectum originis incertæ in scheda manu Gouan "ex Hispania" notatur; sed in Hispania australi a nemini post Broussonnet visa; et fide Poiret Broussonnet plantam suam prope Tanger legit. Specimen incompletum ex herb. Webb, sub *C. betonicæfolia* serius citata, forsan melius huc referendum.

Ab affinibus, præter alias notas, foliorum lobis acute incisis dentatisve, seminibus quam in *C. cretica* duplo minoribus, dignoscenda.

C. BETONICÆFOLIA (*Desf. Fl. Atl.* ii. 58; *Benth. in DC. Pr.* x. 245; *Bot. Mag.* xcix. tab. 6066).

Mar. sept.—Tanger (*Salzm. Exsicc. teste Benth. l. c.*) (*Webb spec.*)! ?

Ar. Geog. Algeria. Ins. Cap. Viridis. Ditio Tingitana. Hispaniæ dubia civis.

Hæc, nisi fallor, est stirps valde ludibunda, et forsan melius cognita in subspecies dividenda. Semina ab auctoribus non descripta sæpe in herbariis desunt. Frustulum in herb. nost. a Webb prope Tanger lectum, mihi incertum videtur. Folium unicum a parte caulis inferiore *C. Barnadesii* magis quam huic conforme. Planta tota subglaberrima; folia floralia ad bracteas parvulas e basi lata acuminatas reducta; pedicelli erecto-patentes calyce ter quaterve longiores; calycis laciniæ parvulæ ovales integerrimæ; corolla videtur lutea, quam in *C. betonicæfolia* genuina duplo major. Specimina ex insulis Capitis Viridis, aspectu satis diversa, habent folia caulina simpliciter serrata glabrescentia. Fide Lange exstat in herb. Schousboe specimen prope

Gades lectum, nemo tamen recentiorum hanc speciem in ditione Gaditana aut alibi in Hispania detexit. An error schedæ Schousboeanæ?

Celsia maroccana (*Ball in Journ. Bot.* 1875, 172).

Descr. emendata:—Planta biennis, vel perennis, tota molliter pilosa, vel rarius in aridis glabrescens, vix aut ne vix viscosa; folia radicalia petiolata lyrato-pinnatifida vel elliptico-spathulata, lobato-incisa, margine crenato-serrata, caulina fere omnia sessilia oblonga basi truncata inæqualiter dentata, floralia breviora apice acuminata, interdum in bracteas parvulas transeuntia; caulis subsimplex vel ramosus, e basi folii decurrente leviter angulatus; pedicelli patentes, fructiferi incrassati capsula matura duplo longiores; calycis laciniæ subfoliaceæ late ovatæ, grosse et inæqualiter serratæ, basin versus nervosæ, capsulam maturam subæquantes; corolla ampla ex aurantiaco rubra; capsula ovato-conica vel ovato-globosa ex styli basi persistente mucronata; semina cylindrico-subconica utrinque truncata, transverse corrugata, pallidiora et profundius excavata quam in spec. Gorgonicis *C. betonicæfoliæ.*

Mar. occid.—In monte Djebel Hadid haud procul Mogador! Agadir (*Coll. Indig.* 1871)! Rabat (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Haud infrequens in regione inferiore Atlantis Majoris, nec deest in saxosis aridis planitie Maroccanæ! Reraya (*J. D. H.*)! In convalle Aït Mesan usque 1400 m.! Seksaoua! Milhaïn! In prov. Shedma!

Melius explorata stirps nostra affinitatem proximam cum *C. betonicæfolia*, Desf. ostendit, et hodie non sine dubio pro subspecie habui; differt habitu, pedicellis brevioribus, calycis laciniis foliaceis, corollæ majoris colore diverso, capsula majore insigniter mucronata, et, nisi fallor, antheris anticis minus longe decurrentibus.

C. RAMOSISSIMA (*Benth. in DC. Pr.* x. 244).

Mar. occid.—Ex sylva Mamora inter flumina Sebou et Bouregreg a Durand allata.

Species tantum ex descript. Benthamiana l. c. cognita. Nemini recentiorum hanc sylvam leonibus et latronibus famosam penetrare licuit.

LINARIA (*Juss. Gen.* 120).

L. SPURIA (*L.*, sub *Antirrhino*; *Mill. Dict.* No. 15; *DC. Pr.* x. 268).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (1851)!

Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).

L. GRÆCA (*Bory et Chaub. Expéd. Mor.* 175, tab. 21, sub *Antirrhino*; *Benth. in DC. Pr.* x. 268). Hujus var. levis est *L. commutata*

(Bernh. in Rchb. Ic. Crit. ix. tab. 815; Willk. et Lge. Fl. Hisp. ii. 559).

Mar. occid.—Casa Blanca! Prov. Haha prope Mogador! In monte Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Satis frequens in regione inferiore. Prov. Shedma! Mesfioua! Amsmiz! In cultis urbis Marocco! Tamarat (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). Adest in agro Byzantino, sed alibi in Asia Mediterranea vix detecta. In Gallia occidentali rarissime obvia.

LINARIA SAGITTATA (*Poir. Dict. Suppl.* iv. 19, sub *Antirrhino*; *H. fil. in Bot. Mag.* xcix. tab. 6060), = L. heterophylla (*Spreng. Syst.* ii. 790; *Chav. Mon. Antirr.* 112; *Benth. in DC. Pr.* x. 270), = Antirrhinum heterophyllum (*Schousb. Gew. Marok.* 181, tab. 3), = L. Lancerottæ (*Delile, Ind. Sem. H. Monsp.*), = L. Webbiana (*Vis. Ill. Ort. Bot. Pad.* 142).

Mar. occid.—Frequens in prov. Haha prope Mogador! (*Schsb. l. c.*) (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In prov. Shedma sat frequens! et hinc inde ad radices Atlantis Majoris. Ourika! Seksaoua!

Ar. Geog. Species Imp. Maroccani et insulæ Lancerottæ Canariensium propria.

Sæpius inter frutices late scandit, caulibus tenuibus flexuosis, interdum, sed rarius, convolutis. Vidimus etiam in saxosis formam pygmæam, ramis rigidis rectis, foliis præter infima omnibus linearibus.

L. LATIFOLIA (*Desf. Fl. Atl.* ii. 40, tab. 134; *Benth. in DC. Pr.* x. 271).

Mar. sept.—Prope Tanger (*Blackmore spec. in Herb. Kew.*)!

Ar. Geog. In Africa boreali-occidentali et in Hispania rarius occurrit.

L. TRIPHYLLA (*L.*, sub *Antirrhino*; *Mill. Dict.* No. 2; *Chav. Mon. Antirr.* 117).

Mar. sept.—Tanger!

Ar. Geog. Regio Mediterraneam fere omnis (exclusa Macaronesia).

L. VENTRICOSA (*Coss. in Bull. Soc. Bot. Fr.* xx. 252).

Descriptionem cel. auctoris citare malui:—

"*Perennis, elata,* glaberrima, glaucescens. Caules validi, sæpius 1 metr. elati, erecti, paniculato-ramosi. *Folia* approximata, alterna, sessilia, *lanceolata*, utrinque attenuata, *integerrima*, rigidula, *penninervia*, nervis primariis 3 prominulis e basi folii emergentibus, secundariis subobsoletis. Racemi terminales multiflori densiusculi, demum elongati. Pedicelli floriferi erecto-patentes, bractea et calyce breviores; fructiferi erecti. *Laciniæ calycinæ* corolla multo breviores, capsulam subæquantes, lanceolatæ *acutiusculæ*. *Corolla magna* (fere ut in *L. vulgari*), cum calcari *circiter 2 centim. longa*, pallide lutea venis croceo-fuscis notata, *tubo late campanulato-subventricoso, calcari* recto tenui *corolla subdimidio breviore,* palato præminente subbilobo dense villoso villis intense luteis. Capsula didymo-subglobosa, loculis subæqualibus, utroque poro terminali 3–4-valvato dehiscente. *Semina* parva, nigra, *trigona,* curvata, *immarginata,* irregulariter striata *striis in tubercula decompositis.*"

Mar. occid.—In sylva e *Callitri quadrivalvi* composita, ad orientem urbis *Mogador* cl. Balansa detexit. Prope Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sat frequens in provincia Shedma! In convallibus interioribus et rarius ad radices Atlantis Majoris. In convalle Aït Mesan usque 1750 m.! In convalle Amsmiz! Prope Keira (*J. D. H.*)!

Monente cel. Cosson *L. ventricosa* ad sectionem *Linariastrum* (Chav. et Benth. in DC. Prod. x. 271), § 2. *Speciosæ* (Benth. loc. cit. 274) pertinens, juxta *L. genistifoliam,* Mill., collocanda, a qua eximie differt laciniis calycinis minus acutis, corolla multo majore tubo ventricoso, calcari subdimidio breviore, etc.

Linaria heterophylla (*Dsf. Fl. Atl.* ii. 48, tab. 140; *H. fil. in Bot. Mag.* xcix. tab. 6041, *non Spreng., nec Chav., nec Benth. in DC. Prod.*), = L. aparinoides (*Willd. Sp. Pl.* iii. 247, sub *Antirrhino*; *Chav. Mon. Antirr.* 138; *Benth. in DC. Pr.* x. 275), = Antirrhinum strictum (*Sibth. et Sm. Fl. Gr.* tab. 594), = Linaria stricta (*Guss. Pl. Rar. Sic.* 250, *et Syn. Fl. Sic.* ii. 122 et 843; *Tenore, Syll. Fl. Neap.* 304), = Antirrhinum multicaule (*Tenore, Prod. Fl. Neap.* 36, *non L.*), = Linaria reticulata (*Rchb. Ic. Pl. Crit.* v. 19, tab. 431, *non Desf.*), = Linaria sicula multicaulis molluginis folio (*Bocc. Icon.* 38).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca! Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Sat frequens præsertim ad radices et in regione inferiore Atlantis Majoris. Mesfioua! Ourika! Amsmiz! Keira! Seksaoua! In convalle Aït Mesan usque 1500 m.!

Ar. Geog. Species per Africam borealem late diffusa. Siciliæ et Italiæ meridionalis, necnon Cariæ et insulæ Cypri civis indigena. Deest in Macaronesia.

Species quam maxime ludibunda ab auctoribus male mulcata. Jam ante duo sæcula a Boccone memorata, et a Cupani, Robert, et Rivino delineata, a cel. Desfontaines nomine *L. heterophyllæ* publici juris facta est. Deinde Willdenovius speciei longe alienæ (*L. sagittatæ,* Poir.) nomen triviale *heterophylla* imposuit, et post eum plurimi auctores nomen antiquius Fontanesianum neglexerunt. Tabula Fontanesiana formam sp. nostræ surculorum foliis latioribus verticillato-senis exhibet. Hanc in Imp. Maroccano non vidimus, et spec. nostris ex radicibus Atlantis propiora sunt quæ vidi ex Sicilia et Oriente, caulibus tenuioribus, foliis surculorum linearibus confertis sæpius non verticillatis. In nostris tamen flores pallidiores ochroleuci, palato flavo nec aurantiaco donati.

—— ——, var. TINGITANA, *nobis*, = L. tingitana (*Boiss. et Reut. Pug.* 84).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Djebel Kebir! Cap. Spartel! (*Boiss. et Reut. l. c.*).

Hæc mihi videtur mera varietas vegetior, foliis omnibus lanceolato-linearibus, nec anguste linearibus. Spec. nostra *L. heterophyllæ* prope Casa Blanca lecta formam intermediam sistunt. Secundum cll. auctores nascitur etiam in monte Santo prope Oran Algeriæ.

Linaria viscosa (*L.*, sub *Antirrhino*; *Dum. Cours Bot. Cult., ex Chav. Mon. Antirr.* 141; *Benth. in DC. Pr.* x. 276).

Mar. sept.—Prope Tetuan!

Mar. occid.—Casa Blanca!

Ar. Geog. Hispania australis. Africa boreali-occidentalis.

Differt a *L. heterophylla* statura multa minore, caule fere semper subsimplici, foliis surculorum verticillato-ternis v. quaternis caulinis superioribus rarioribus, in apice caulis vel ramorum brevium carentibus, racemo abbreviato. Hæ notæ tamen in hac grege instabiles sunt, et hanc igitur sicut subspeciem enumeravi. Cll. Willkomm et Lange in Fl. Hispanica optimo consilio *L. Salzmanni* (Boiss. Voy. Esp. 456, tab. 128; Benth. in DC. x. 285), ad varietatem *L. viscosæ* reduxerunt. Spec. nostra a Casa Blanca floribus pallide purpurascentibus forsan melius ad hanc varietatem referenda.

L. Maroccana (*H. fil. in Bot. Mag.* xcviii. tab. 5983).

Descriptio emendata:—Annua erecta ramosa, superne viscoso-pubescens, foliis in ramis inferioribus surculiformibus sæpius lineari-lanceolatis, caulinis numerosissimis lineari-subulatis, racemis elongatis multifloris, pedicellis calyce longioribus, calycis segmentis anguste linearibus obtusis adpressis, vel sub anthesi paululum recurvatis, calcari elongato recto corollam saturate coccineo-purpuream pedicellumque superante, labio superiore erecto bipartito lobis apice rotundatis, inferiore breviore truncato lobis lateralibus parvis rotundatis intermedio minimo, palato prominente emarginato aureo intus villoso, seminibus subcylindraceis transverse rugosis gibbosis.

Mar. merid.—In glareosis torrentium, in arvis et incultis saxosis ad radices Atlantis Majoris haud infrequens. Mesfioua! Ourika! Sektana!

Planta primo aspectu a *L. heterophylla*, in eadem regione obvia, omnino diversa. In hac rami plurimi stricti verticales e collo radicis cum surculis prodeunt, dum in *L. maroccana* caulis ramosus ramos nonnullos steriles surculiformes et inde ramos floriferos adscendentes sæpius divisos edit, inflorescentia inde racemoso-paniculata. In planta Hookeriana spontanea pedicelli duplo longiores, corolla major pulchre coccineo-purpurea, nec ut in tabula Fitcheana, e planta culta desumpta, læte purpurea. Semina tandem gibbosa quod vix aut ne vix occurrit in seminibus *L. heterophyllæ*. Ex observatione tamen plantæ e seminibus nostris in Horto Paroliniano pluribus annis cultæ et denique formarum *L. heterophyllæ* ineditarum in Herbario Algeriensi amicissimi Cosson, affinitas proxima nostræ plantæ et *L. heterophyllæ* mihi certior facta est. In planta culta folia latiora, anguste lineari-lanceolata, minus crebra, rami stricti subindivisi, racemus minus glandulosus subglaberrimus, corolla anno primo læte purpurea, fit demum pallidior et tota planta similior *L. tingitanæ* floribus purpureis quam *L. maroccanæ* nostræ. Pedicelli tamen et calycis laciniæ longiores quam in omnibus *L. heterophyllæ* formis a me visis. Pro subspecie enumeravi donec res certior fiat.

Linaria galioides (*Ball in Journ. Bot.* 1875, 173).

Radix perennis; caules floriferi plurimi erecti superne glabri, inferne cum surculis sterilibus numerosis prostratis tenuiter pubescentes; folia caulina lineari-subulata, approximata pseudo-verticillata, superne pauciora, surculorum verticillata, in quovis verticillo 5–6, latiora; pedicelli segmentis calycinis oblongo-linearibus parce glandulosis breviores; flores in racemo brevissimo conferti; calcar attenuatum corollæ flavæ labio inferiori aurantico æquilongum. Semina immatura angulosa, corrugata.

Mar. merid.—Regionis subalpinæ Atlantis Majoris incola in regionem inferiorem secus torrentes descendit. Legimus in convalle Aït Mesan supra Arround, a 2000 m. ad 2400 m.! vidi specimen mancum in glareis Oued en Fisk lectum, et alterum secus torrentem Ourika.

—— ——, var. **pseudosupina** (*Ball, loc. cit.*).

Caules omnes prostrati et fere omnes florigeri, folia subconformia breviora et latiora quam in specie. Facie *L. supinæ* similis, sed nisi fallor seminum structura aliena. Habitat in regione alpina in jugo Tagherot, a 2700 ad. 3200 m.!

Ob semina immatura de affinitate hujus plantæ haud omnino certus sum, sed verisimiliter in grege *L. heterophyllæ*, Desf., collocanda erit. Ab hac radice perenni, surculis numerosis, calycis segmentis multo minoribus, racemo brevissimo, pedicellis pluries brevioribus, foliis caulinis pseudo-verticillatis, satis superque differt.

L. spartea (*L., et Cav. Ic.* i. tab. 32, sub *Antirrhino*; *Lk. et Hffgg. Fl. Port.* 233, tab. 36; *DC. Pr.* x. 276),=Antirrhinum junceum (*L. Herb.*; *Lam. Dict.* iv. 332),=Linaria juncea (*Desf. Fl. Atl.* ii. 43).

In Imperio Maroccano legit Broussonnet, teste Desfontaines *loc. cit.*

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Ins. Canarienses.

A recentioribus in ditione nostra non visa, sed facile in territorio vix explorato invenienda.

LINARIA BIPARTITA (*Vent. Hort. Cels.* tab. 83, sub *Antirrhino*; *Willd. Enum.* 640; *DC. Pr.* x. 277),=L. linogrisea (*Lk. et Hffgg. Fl. Port.* 240, tab. 41; *DC. Pr. l. c.*),=L. speciosa (*Jacq. fil. Ecl.* i. 141, tab. 95),=L. incarnata (*Spreng. Syst.* ii. 643).

Mar. sept.—Tanger! (*Salzm. Exsicc.*, sub *L. laxiflora*)!

Mar. occid.—Mazagan! Mogador! (*Broussonnet ex Benth. in DC. Prod.*). Aïn el Hadjar! In regione litorali pr. Haha frequens! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In zona *Arganiæ* prov. Shedma sat frequens; fit rarior in terris interioribus. Shedma pluribus locis! Mskala! Mtouga! Seksaoua! Tasseremout (*G. Maw spec.*)! Verisimiliter huc "*L. purpurea*" (Lowe Cat.) prope Mogador lecta. *L. purpurea* est sp. in reg. Mediterranea orientali indigena, in Hispania et in Africa boreali-occidentali omnino carens, et vix aut ne vix in agro Mogadorensi sponte provenit.

Ar. Geog. L. bipartita Africam boreali-occidentalem incolit et rarius in peninsula Iberica provenit.

Stirps satis variabilis, caulis plus minusve ramosus, ramis erectis interdum diffusis; pedicelli sæpius calyce ter quaterve longiores interdum vix sesquilongiores, calycis segmenta ovato-lanceolata variant margine membranaceo vel fere immarginata, subobtusa, acuta, vel acuminata. Inter spec. nostra nonnulla a *L. linogrisea* Lusitanica nulla nota distinguenda, altera floribus minoribus, calycis segm. acuminatis, racemo pubescente, *L. sapphirinæ* (Lk. et Hffgg. Fl. Port. 241, tab. 42) simillima sunt. Hæc tamen (sec. Willk. et Lge. Fl. Hisp. ii. 562) habet semina semilunari-trigona angulata, nec ut in *L. bipartita* ovoideo-cylindrica transverse corrugata, et, uti jam suspicatus est cel. Benth., eadem est ac *L. delphinioides* (J. Gay in Dur. Pl. Astur. Exsicc.). Nomen Gayanum igitur recentius antiquiori postponendum.

Specimina minora *L. bipartitæ* interdum *L. laxifloræ* (Dsf. Fl. Atl. ii. 45, tab. 138; *DC. Pr.* x. 285) valde similia sunt. Hæc novissima, nuper in territ. Maroccano detecta et mihi a cel. Cosson communicata, distinguitur ramis flexuosis nec strictis, floribus minoribus, et præsertim seminibus angularibus, testa reticulato-lacunosa nec transverse corrugata.

Pace tanti viri, sectiones generis § 3. *Versicolores* et § 7. *Diffusæ* a cel. Bentham in DC. Prod. admissæ nimis affines sunt, et plurimæ species in sectionibus diversis enumeratæ ægre distinguuntur.

L. ARVENSIS (*L.*, sub *Antirrhino*; *Desf. Fl. Atl.* 45; *Benth. in DC. Pr.* x. 280), var. *β*, SIMPLEX (*L.*, *Chav. Mon. Antirr.* 157),=L. simplex (*Willd. Sp. Pl.* iii. 243, sub *Antirrhino*; *DC. Fl. Fr.* iii. 588; *Benth. in DC. Pr.* x. 280).

Mar. sept.—Tanger!

Mar. merid.—In convallibus et in regione superiore Atlantis Majoris. Supra Amsmiz! In convalle Aït Mesan supra Arround usque 2400 m.! In monte Djebel Tezah circ. 2500 m.!

Ar. Geog. Species per regionem Mediterraneam fere omnem (exclusa Macaronesia) diffusa. In calidioribus Europæ mediæ forsan cum seminibus introducta.

Specimina nostra subalpina a typo discrepant habitu diffuso, ramis brevibus basi supinis adscendentibus, foliis latioribus. Semina variant disco lævissimo vel minute tuberculato.

LINARIA MARGINATA (*Desf. Act. Soc. Par.* i. 36, tab. 7; *Benth. in DC. Pr.* x. 281).

Mar. sept.—In rupibus juxta Tetuan! In monte Beni Hosmar prope Tetuan (*Webb Herb.*)!

Mar. merid.—In rupibus supra Seksaoua circ. 1100 m.! In regione alpina Atlantis Majoris in jugo Tagherot circ. 3000 m. s. m.!

Ar. Geog. In Africa boreali-occidentalis hinc inde obvia; rarissime occurrit etiam in Hispania australi. Spec. Tetuanensibus omnino conformia bis inveni in rupibus circ. Ronda.

Specimina multa hujus gregis diligenter explorata mihi omnia ad speciem unicam collectivam *L. tristem* (*L.*, sub *Antirrhino*) reducenda videntur. Plurimæ tamen subspecies notis substabilibus definitæ enumerandæ videntur—scilicet *L. marginata*, Desf., *L. lusitanica*, Lk. et Hffgg., *L. melanantha*, Boiss. et Reut., necnon *L. lurida*, nob. Nec forsan satis diversæ sunt *L. cæsia*, Lag.; *L. anticaria*, Boiss. et Reut. et *L. Rossmässleri*, Willk. *L. marginata* distinguitur foliis quam in *L. tristi* latioribus, plerumque in verticillos subdistantes dispositis, herba viridi nec cæsia, corolla majuscula lutea, nec fusca vel fusco-lutea variegata. Calcar variat rectum vel recurvum, rami prostrati vel adscendentes. In monte Beni Hosmar prope Tetuan specimina legimus foliis duplo latioribus, *L. anticariæ*, B. & Reut., simillima, nisi floribus luteis nec albido-cærulescentibus.

Ex seminibus in jugo Tagherot lectis in Horto Paroliniano cultis enata sunt specimina Tetuanensibus simillima, quamvis planta spontanea *L. tristi* propius accedit foliis obtusioribus subcæsiis. Semina variant disco lævissimo vel tuberculato, et eodem modo ludit *L. tristis* genuina in rupibus Calpes satis frequens.

L. lurida (*Ball in Journ. Bot.* 1875, 173).

Perennis, e collo radicis ramosissima, ramis decumbentibus surculis sterilibus numerosis; herba tota glaberrima, luride glauca; folia creberrima, crassiuscula, anguste linearia, pseudo-verticillata, subæqualia; flores in racemo brevi 5–8 majusculi; bracteæ lineares, pedicellum, calyci subæqualem superantes; calycis segmenta interdum parce glandulosa, oblongo-spathulata, elongata; corolla sordide ochroleuca, calcari lutescente conico sensim attenuato subbrevior, galea apice bifida, labio inferiore macula obscura notato, valde convexo, fauce velutina. Semina satis matura non vidimus.

Mar. merid.—In regione alpina Atlantis Majoris legimus, a 3200 m. usque 3500 m., in jugo Tagherot!

Facie aliena sed structura valde proxima *L. marginatæ*, Desf., et præsertim *L. melananthæ*, B. et R. Pug. Ab hac novissima corolla duplo majore et calcari multo magis inflato, segmentis calycinis majoribus, foliis magis confertis, insigniter glauco-virentibus, diversa.

LINARIA AMETHYSTEA (*Lk. et Hffgg. Fl. Port.* i. 253, tab. 47; *Benth. in DC. Pr.* x. 283), = Antirrhinum bipunctatum (*Cavan. Ic.* i. tab. 33, *non L., ex Benth. l. c.*), = A. polygonifolium (*Poir. Herb., et* verisimiliter, *Dict. Suppl.* iv. 26), = Linaria polygonifolia (*Benth. in DC. Pr.* x. 282, quoad plantam Gibraltaricam).

Mar. occid.—? Legi in pr. Haha ab urbe Mogador meridiem verus!

Ar. Geog. L. amethystea genuina hucusque in peninsula Iberica nec alibi detecta.

Specimina nostra fructifera (corolla unica lilacina superstite munita), foliis angustioribus, racemo vix glanduloso et pedicellis brevioribus ad *L. Munbyanum* accedunt; sed semina insigniter concava margine subincrassato potius *L. amethysteæ*.

L. Broussonnetii (*Chav. Mon. Antirr.* 169; *Benth. in DC. Pr.* x. 283), quacum sicut varietas associanda est *L. multipunctata* (Lk. et Hffgg. Fl. Port. i. 254, tab. 48), et verisimiliter *L. ignescens* (Kunze, Chlor. Hisp. 488).

Mar. occid.—Spec. incompleta legi in arenosis prope Mogador! et prope Aïn el Hadjar! (Spec. prope Mogador lectum a Broussonnet in herb. Poiret descripsit cl. Chavannes.)

Mar. merid.—Specimen prope Sektana lectum comm. cl. G. Maw!

Ar. Geog. Peninsula Iberica. Imp. Maroccanum. Uti jam suspicatus est cel. Bentham l. c., hæc est *L. amethysteæ* proxime affinis; differt etenim floribus majoribus flavis vel luteis palato sæpe croceo, bracteis inferioribus sæpe (non semper) reflexis. Racemus variat glandulosus vel subglaberrimus. Semina in spec. nostris disco tuberculata, in spec. Hispanicis sæpius lævia. Pro subspecie habui donec melius doceant qui plantam vivam observare possint.

L. Munbyana (*Boiss. et Reut. Pug.* 89; *Willk. et Lge. Fl. Hisp.* ii. 567).

Mar. occid.—In provincia Haha haud procul Mogador! et in arenosis juxta Aïn el Hadjar!

Mar. merid.—In convalle Amsmiz!

Ar. Geog. Africa boreali-occidentalis. Hispania australis.

Hæc planta, etsi aspectu valde diversa, est *L. amethysteæ* proxime affinis; nisi lusus tantos in hac grege vidissem pro specie probe diversa habuerim. Differt herba fere tota glaberrima (adsunt tamen glandulæ nonnullæ in calyce et pedicellis), foliis angustioribus linearibus, pedicellis calyce brevioribus, flore minore flavo, calcari tenuiore, seminibus vix concavis anguste marginatis margine pallidiore vix incrassato. Hæ notæ tamen parum stabiles et hanc inter subspecies *L. amethysteæ* animo fere certo enumeravi. Specimina *L. multicaulis*, Mill., a cl. Balansa prope Mostaganem lecta (Pl. d'Algérie, 1851, No. 70) certe huc referenda et diagnosi Benthamianæ satis congrua sunt. Specimina authentica *L. multicaulis* non vidi, et cl. Chavannes hanc ad varietatem *L. glaucæ* reduxit, facile tamen nomen hujus stirpis erit *L. multicaulis* (*L.*, sub *Antirrhino*). *Linaria atlantica* (Boiss. et Reut. Pug. 90) juxta Oran detecta, *L. Munbyanæ* simillima, distinguitur calcari corolla breviore, capsula minore, seminibus denique angulatis. Nuper habui a cel. Cosson spec. *L. atlanticæ* ad ostium fluminis Oued el Abid lecta calcari corollam æquante et capsula intermedia, seminibus ex eadem capsula alteris angulatis, alteris marginatis illis *L. Munbyanæ* simillima. An igitur *L. atlantica* ad var. heterospermam *L. Munbyanæ* reducenda?

LINARIA TOURNEFORTII (*Poir. Dict. Suppl.* iv. 24, sub *Antirrhino*; *Lange, Ind. Sem. H. Hafn.* 1859, 28),=L. saxatilis (*Benth. in DC. Pr.* x. 284), var. β. GLABRESCENS (*Lange, l. c.*),=L. Perezii (*J. Gay in Durieu, Pl. Ast. Exsicc.*). Synonyma auctorum valde dubia.

Mar. merid.—Specimen unicum in distr. Reraya legit J. D. H.!

—— ——, var. γ, MINOR (*Lange, l. c.*), verisimiliter *L. glutinosa* (Lk. et Hffg. Fl. Port. tab. 39).

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan supra Arround! In monte Djebel Tezah ultra 2200 m.! Tamarat (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Species hucusque peninsulæ Ibericæ propria.

Species extricatu difficilis; formæ majores *L. verticillatæ*, Boiss., minores propius diversissimæ *L. Munbyanæ* accedunt. Specimen Hookerianum supra citatum, bienne vel perenne, satis bene cum *L. Perezii*, J. Gay, congruit, dum spec. nostra ex regione subalpina spec. Lusitanicis *L. glutinosæ* similia sunt. Nomen triviale *saxatilis* a cl. Lange justa causa prætermissum dum *Antirrhinum saxatile* (L. Sp. Pl. 835) est sp. omnino incerta, a Linnæo *L. hirtæ*, sp. omnino alienæ, comparata. Quoad *L. saxatilem* (Lk. et Hffgg. Pl. Port. i. 238, tab. 40) res mihi videtur incerta. Auctores de seminibus siluerunt et tabula citata valde similis *L. verticillatæ*, Boiss. Vidi tamen in herb. J. Gay, hodie Kewensi, frustulum ex spec. in herb. Antoine de Jussieu a cel. Link communicatum nostræ sp. certe referendum. *L. glutinosa* (Lk. et Hffgg. Fl. Port. i. 238, tab. 40) a cl. Lange omnino diversa habetur ob semina in tab. citata immarginata (an errore phytographi?). Vidi spec. ad Setubal, loco classico ab auctoribus citato, ab equiti W. C. Trevelyan lecta tabulæ citatæ et spec. nostris Atlanticis conformia, seminibus distincte marginatis, margine angusto paululum incrassato.

L. RUBRIFOLIA (*Rob. et Cast. in DC. Fl. Fr.* v. 410; *Benth. in DC. Pr.* x. 287).

Mar. merid.—Legi in convalle Aït Mesan circ. 1700 m.!

Ar. Geog. Gallia australis. Hispaniæ montes. Sicilia. Sardinia. Atlas Major.

ANARRHINUM (*Desf. Fl. Atl.* ii. 51).

A. PEDATUM (*Desf. l. c.* tab. 141; *Benth. in DC. Pr.* x. 289).

Mar. sept.—Tetuan (*Webb spec.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—In umbrosis prov. Shedma! et in aridissimis juxta Aïn Oumast! In convalle Aït Mesan usque 1350 m.! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa borealis.

A. FRUTICOSUM (*Desf. Fl. Atl.* ii. 52, tab. 142; *Benth. in DC. Pr.* x. 289).

Mar. merid.—In convalle Amsmiz a 1300 m. usque 1500 m.!

Ar. Geog. Africa borealis. Forma valde proxima in Oriente et in Abyssinia.

Characteres quibus cel. Bentham *A. orientale* suum ab *A. fruticoso* distinxit mihi videntur non satis constantes. Habitus in utraque sp. sæpe idem.

ANTIRRHINUM (*L. Gen.* 750).

A. ORONTIUM (*L., DC. Pr.* x. 290).

Mar. sept.—Tanger (*Webb Herb.*)! Prope Cap. Spartel! Tetuan! Inter Tetuan et Ceuta!

—— ——, var. INDICUM (*Chav. Mon. Antirr.* 90), = A. indicum (*Royle Herb.*).

Mar. occid.—Mogador! Aïn el Hadjar! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Shedma! Seksaoua!

Var. hæc, a Bentham in DC. Pr. l. c. prætermissa, differt herba glaberrima, caule glabrescente, bracteis elongatis cum foliis angustis, corolla cum capsula minoribus.

—— ——, var. GRANDIFLORUM (*Chav. Mon. Antirr. l. c.*; *Benth. in DC. Pr. l. c.*), = A. calycinum (*Lam. Dict.* iv. 365; *Salzm. Exsicc.*).

Mar. sept.—Prope Tanger frequens in arenosis maritimis! (*Salzm. Exsicc.*)!

Ar. Geog. Species in temperatis et subtropicis orbis veteris late diffusa, in America boreali verisimiliter introducta. Var. *indicum* in India boreali-occidentali, in montibus Nilghiri, in Abyssinia, in Macaronesia et in Africa boreali magis frequens. Var. *grandiflorum* in regione Mediterranea calidiore hinc inde occurrit.

A. MAJUS (*L., DC. Pr.* x. 291).

Mar. sept.—In rupibus montis Beni Hosmar! (*Webb Herb.*)!

Ar. Geog. In regione fere omni Mediterranea (exclusa Macaronesia) videtur spontaneum. In Europa media et in America extratropica obvium, sed verisimiliter introductum.

Antirrhinum tortuosum (*Bosc, Chav. Mon. Antirr.* 87; *Benth. in DC. Pr.* x. 291), var. CALYCE PUBESCENTE,=A. majus, var. angustifolium (*Willk. et Lge. Fl. Hisp.* ii. 583).

Mar. sept.—In rupibus juxta urbem Tetuan (1851)!

Planta nostra *A. tortuoso* genuino adamussim convenit nisi calyce et tubo corallino extus pubescentibus. Eandem plantam legi in rupibus Calpes calycibus interdum pubescentibus, sæpius glaberrimis. Differt ab *A. majore* ramis vel caulibus e rhizomate lignoso ortis, brevibus plus minusve tortuosis, cum foliis linearibus glaberrimis, floribus brevissime pedicellatis subfasciculatis, calycis segmentis angustioribus.

Ar. Geog. Per regionem Mediterraneam occidentalem (exclusa Macaronesia) hinc inde dispersum.

Ut morem gererem magistris *A. tortuosum* sicut subspeciem enumeravi. Mihi tamen nil nisi *A. majoris* forma rupestris videtur. Specimina tamen hujus in rupibus Beni Hosmar lecta omnino typica, et ab *A. tortuoso* aspectu diversissima.

A. INTRICATUM (*Ball in Journ. Bot.* 1875, 173).

Subspecies post *A. ramosissimum* (Coss. in Bull. Soc. Bot. ii. 254) enumeranda.

A. ramosissimo facie simillimum adeo ut sine floribus vix dignoscitur; sed eximie differt corollæ dimidio minoris extus pubescentis labio superiore emarginato vix bifido, non reflexo, labio inferiore brevissime trifido, lobis subæqualibus, fauce non clausa, segmentis calycinis brevibus acutis margine hirtulis (nec glaberrimis), capsula minore superne tenuiter glanduloso-pubescente. Semina compressa in utraque facie cristato-marginata. Testa ex alveolis inordinatis profunde rugosa. Embryo cylindrico-ovoideus vix curvatus. Fruticulus intricatus, sub anthesi aphyllus. Nisi certus fuissem stirpem nostram cum specie Cossoniana nexu genetico colligari vix in genere *Antirrhino* collocarem.

Mar. merid.—Legimus in glareosis Oued en Fisk prope Gurguri!

Ar. Geog. Species Africæ borealis civis; subspecies nostra Imp. Maroccani propria.

SCROPHULARIA (*L. Gen.* 756).

S. ARGUTA (*Soland. in Ait. Hort. Kew.* ii. 342; *Benth. in DC. Pr.* x. 305).

Mar. merid.—Satis frequens in rupibus regionis inferioris præsertim ad radices Atlantis Majoris. Seksaoua! Milhaïn! Gurguri! Aïn Tarsil! Mskala! In collibus prope urbem Marocco (*G. Maw*)!

Ar. Geog. Insulæ Canarienses. Provinciæ meridionales Imper. Maroccani. In regno Mascat (legit *Aucher*). In litore Africano Maris Rubri (legit *Lord*). In Hispaniæ Sierra de Gador unico loco (legit *Bourgeau*).

In spec. Canariensibus cymæ subsessiles, inflorescentia fere thyrsoidea;

in Maroccanis cymæ semper pedunculo fulcratæ, sæpe ex axillis foliorum enato, rarius basi bracteato. De ramis subterraneis *S. argutæ*, confer Durieu in Bolle, Scroph. Canarienses, p. 12.

SCROPHULARIA SAMBUCIFOLIA (*L., Benth. in DC. Pr.* x. 306),=S. mellifera (*Ait. Hort. Kew.* ii. 343; *Desf. Fl. Atl.* ii. 53, tab. 143; *Salzm. Exsicc.*),=S. viridiflora (*Poir. Voy.* ii. 194).

Mar. sept.—Tanger! (*Webb spec.*)! (*Schousb. spec.*)! (*Salzm. Exsicc.*)! In monte Beni Hosmar pr. Tetuan!

Mar. occid.—Rabat (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa boreali-occidentalis. Peninsula Iberica.

Variat pedicellis dense glandulosis vel subglaberrimis, et segmentis calycinis late vel anguste marginatis.

S. SCORODONIA (*L., Benth. in DC. Pr.* x. 307). Var. foliis fere semper simpliciter nec duplicato-serratis, = S. papillaris (*Boiss. et Reut. Pug.* 90).

Mar. sept.—In fruticetis montis Djebel Kebir prope Tanger (*B. et R. l. c.*), (*Webb spec.*, sub *S. Scorodonia*, var.?)!

Ar. Geog. Species occidentalis ex Anglia australi usque Macaronesiam diffusa; in Hispania orientali rara vel omnino deficiens.

S. papillaris mihi videtur var. *S. Scorodoniæ* thyrso depauperato foliis simpliciter serratis. Folia inferiora in spec. Webbiano parce duplicato-serrata, serraturis quam in typo obtusioribus; thyrso vix foliaceo.

S. AURICULATA (*L., Benth. in DC. Pr.* x. 309).

Mar. sept.—Tanger (*Webb spec.*)! In monte Djebel Kebir! Prope Tetuan!

—— ——, var. PARVIFLORA, *nob.* Foliis latioribus, caulinis inferioribus secus petiolum inæqualiter pinnatim lobatis, corolla et capsula minoribus. Facie *S. Smithii*, Horn., refert.

Mar. merid.—In irrigatis prope urbem Marocco! et in horto Ben Dreis!

Ar. Geog. Species in regione Mediterranea calidiore imprimis occidentali, ab insula Creta usque Lusitaniam late diffusa.

Affinitatem proximam hujus et *S. aquaticæ*, L., auctores indicarunt. Hæc forsan pro subspecie enumeranda?

S. HISPIDA (*Desf. Fl. Atl.* ii. 55).

Mar. sept.—? Specimen vidi prope Tingidem lectum sed notulam frustra quæsivi. Nascitur in Algeria occidentali ad fines Maroccanas, et procul dubio in ditione nostra indigena est.

Hanc speciem probe distinctam cel. Bentham in DC. Prod. l. c. cum præcedente immerito conjunxit. Differt etenim notis pluribus gravioribus, ut monuerunt cll. Boissier et Reuter in Pugillo cit. p. 91. Folia crassiora grosse dentato-lobata, dentibus semper acutis; thyrsus elongato-pyramidatus, nec interrupte spicatus; calycis segmenta anguste marginata; capsula minor ovato-conica, acuta; semina majora prismatico-cylindrica, truncata, longitudinaliter costata, costis granulatis.

Ar. Geog. Africa boreali-occidentalis.

—— ——, var. vel sp. nov.?

Mar. merid.—Prope Amsmiz legi frustulum plantæ insignis *S. hispidæ* pluribus notis accedens, sed vix conjungendæ.

Planta 5-pedalis et ultra; caulis erectus, tetragonus, anguste alatus, ramis plurimis elongatis subbipedalibus instructus; folia caulina pinnatipartita lobis discretis petiolulatis omnibus lanceolatis acuminatis, acute duplicato-serrata; cymæ in ramis thyrsoideæ, superiores bractea lineari suffultæ, approximatæ, inferiores distantes basi foliaceæ; calycis segmenta orbicularia late scarioso-marginata; corolla parva ochroleuca, labio superiore bifido lobis rotundatis leviter sinuatis; staminodium parvum orbiculare; capsula ovato-conica acuta; semina *S. hispidæ*.

SCROPHULARIA LÆVIGATA (*Vahl, Symb.* ii. 67; *DC. Pr.* x. 309),= S. trifoliata (*Desf. Fl. Atl.* ii. 54; *Wydl. Mon. Scrof.* 34, *non L.*).

Mar. occid.—Mogador (*Lowe spec. in Herb. Kew.*)!

Ar. Geog. Africa borealis. Fertur in Oriente, sed spec. non vidi.

S. DURANDII (*Boiss. et Reut. Pug.* 91).

Mar. sept.—Specimen unicum in humidis prope Tingidem a Durand lectum exstat in herb. Pavon. hodie Boissieriano (*Boiss. e Reut. l. c.*).

Ex descriptione *S. auriculatæ* facie subsimilis, sed ex staminodio lineari in grege *S. caninæ*, L., collocanda.

S. CANINA (*L., DC. Pr.* x. 315).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Sheshaoua! Shedma! Mtouga (*J. D. H.*)! Oued en Fisk (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. PINNATIFIDA (*Boiss. Voy.* 446),= S. pinnatifida (*Brot. Fl. Lus.* i. 202; *Wydl. Mon. Scrof.* 43).

Mar. sept.—Tanger (*Webb Herb.*)!

Ar. Geog. Species in regione Mediterranea (exclusa Macaronesia) frequens. Occurrit etiam in calidioribus Europæ mediæ.

—— ——, var. vel. sp. nov.?

Mar. merid.—Legi in convalle Amsmiz spec. incompletum pluribus notis a *S. canina* diversum. Flores longius pedicellati; segmenta calycina minuta, corollæ vix sextam partem attingentia, orbiculata, anguste scarioso-marginata; corolla duplo major sordide ochroleuca, staminodio in duabus a me corollis exploratis nullo; semina nondum matura. Planta ulterius exploranda.

SCROPHULARIA FRUTESCENS (*L., Benth. in DC. Pr.* x. 316),=S. pinnatifida (*Salzm. Exsicc., non aliorum*).

Mar. sept.—In arenosis maritimis juxta Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)!

Ar. Geog. In litore Atlantico peninsulæ Ibericæ et Africæ Tingitanæ. Forma proxime affinis (var. vel subsp.) in Teneriffa.

DIGITALIS (*L. Gen.* 758).

D. LACINIATA (*Lindl. Bot. Reg.* tab. 1201; *DC. Pr.* x. 449).

Mar. sept.—Legimus nondum florentem in monte Beni Hosmar pr. Tetuan capsulis exsiccatis anni prioris adhuc onustam! In montosis Tetuanensibus (*Webb spec.*)!

Ar. Geog. Hispania Bætica. Montes Tetuanenses.

D. LUTEA (*L., DC. Pr.* x. 452), var. ATLANTICA, *nob.*

In hac forma flores minores (fere *D. australis*, Ten.), folia floralia subbracteiformia, flores superantia.

Mar. merid.—Legimus in convalle Aït Mesan circ. 2000 m.! Vidi spec. forsan eodem loco lecta a cll. Rein et Fritsch!

Ar. Geog. Species in Europa media sat frequens; in Italia, Dalmatia et Hispania boreali obvia, alibi in regione Mediterranea rara vel omnino absens.

VERONICA (*L. Gen.* 25).

V. ANAGALLIS (*L., DC. Pr.* x. 467; *Schousb. Gew. Marok.* 4).

Mar. sept.—Tanger! (*Schsb. l. c.*).

Mar. occid.—Mogador! (*Lowe Cat.*).

Mar. merid.—In irrigatis urbis Marocco! Mesfioua! Mtouga! Amsmiz!

Ar. Geog. Species amphigea, in temperatis etiam subtropicis hemisphæræ borealis late diffusa. In Africa australi verisimiliter etiam indigena.

Spec. nostra ex prov. meridionalibus plurima ad *V. anagalloidem* (Guss. Ic. Pl. Rar. 5, tab. 3) accedunt. Hæc mihi videtur mera varietas formis intermediis conjuncta.

V. BECCABUNGA (*L., DC. Pr.* x. 468).

Mar. merid.—Legimus in uliginosis subalpinis convallis Aït Mesan in ascensu jugi Tagherot circ. 2600 m.! et secus torrentem prope pagum Amsmiz ad. circ. 900 m.!

Ar. Geog. In temperatis hemisphæræ borealis præsertim frigidioribus late diffusa. In montibus excelsioribus regionis Mediterraneæ, Asiæ mediæ et Abyssiniæ. In insula Teneriffa olim lecta.

V. CUNEIFOLIA (*Don in Ann. Nat. Hist.* vii. 457; *Benth. in DC. Pr.* x. 472),=V. cariensis (*Boiss. Diagn. Pl. Or.* ser. 1, iv. 75), var. ATLANTICA, *nob.*,=V. atlantica (*Ball in Journ. Bot.* 1875, 174).

Radix lignosa; caules plurimi, tenues, radicantes; folia petiolata, basi anguste cuneata, inciso-crenata, floralia bracteiformia integerrima, pedicello subæqualia vel longiora; segmenta calycina lineari-lanceolata inæqualia, quinto minore sæpe adjecto; corolla in racemis plurifloris majuscula, lobis staminibus æquilongis; capsula cordato-orbicularis, profunde emarginata; semina nimis immatura.

Mar. merid.—Habitat in regione subalpina et alpina Atlantis Majoris—in jugo Tagherot 2200 m. ad 3000 m.! in monte Djebel Tezah 2200 m. ad 2800 m.!

Flores in var. nostra quam in planta Asiatica majores, eos *L. saxatilis*, L., æmulantes, folia præsertim inferiora angustiora sunt, et stamina longiora. Capsula videtur magis compressa; sed hæ notæ differentiales non gravis momenti. Olim pro subspecie habui; hodie pro varietate enumeravi.

Specimina in monte Djebel Tezah lecta flores paululum minores et folia pilosa subhispida ostendit.

Ar. Geog. Species hucusque nonnisi in montibus Asiæ Minoris detecta.

VERONICA ARVENSIS (*L., DC. Pr.* x. 483).

Mar. sept.—Tanger! Cap. Spartel!

Mar. merid.—In regione subalpina Atlantis Majoris. In convalle Aït Mesan et in jugo Tagherot a 2000 m. usque 3000 m. In monte Djebel Tezah ultra 2300 m.!

Ar. Geog. In temperatis hemisphæræ borealis. In Macaronesia et in montibus Asiæ mediæ obvia.

Specimina in monte Djebel Tezah lecta ostendunt herbam dense pubescentem subvillosam, capsulas majores profundius emarginatas et pedicellos longiores calyci subæquilongos. Quæ tamen legi in convalle Aït Mesan inter hæc et typum Europæum fere intermedia sunt.

V. TRIPHYLLOS (*L., DC. Pr.* x. 486).

Mar. merid.—Specimen unicum legi in convalle Amsmiz circ. 1400 m.!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). Europa media. Scandinavia australis.

V. TOURNEFORTII (*Gmel. Fl. Bad.* i. 39, anno 1805), = V. persica (*Poir. Dict.* viii. 542, anno 1808; *Gr. et Godr. Fl. Fr.* ii. 598; *Willk. et Lge. Fl. Hisp.* ii. 595), = V. Buxbaumii (*Ten. Fl. Nap.* i. 7, tab. 1; *Benth. in DC. Pr.* x. 487), = V. filiformis (*DC. Fl. Fr.* v. 388, *non Sm.*). Nomen triviale *persica* infaustum nullo jure prioritatis gaudet.

Mar. sept.—In maritimis prope Tanger!

Ar. Geog. Planta verisimiliter regionis Mediterraneæ totius (exclusa Macaronesia) indigena, in Europa media cultura introducta, hodie late diffusa. Adest etiam in montibus Himalaya. In America boreali forsan introducta.

VERONICA AGRESTIS (*L., Benth. in DC. Pr.* x. 487).

Mar. merid.—In convalle Aït Mesan supra Arround circ. 2100 m.!

Ar. Geog. In temperatis hemisphæræ borealis late diffusa. In Macaronesia non deest.

V. didyma (*Ten. Fl. Nap. Prod.* 6),=V. polita (*Fr. Nov. Fl. Suec.* ed. 2, p. 1; *Gr. et Godr. Fl. Fr.* 598).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Notæ plurimæ quibus hæc a simillima *V. agresti* dignoscitur certe variabiles sunt, et formæ intermediæ non desunt. Secundum cll. Grenier et Godron l. c. hæc differt seminibus in quovis loculo 8–10, stylo semper exserto, dum in *V. agresti* semina in quovis loculo 4–5, et stylus emarginaturam capsulæ non superat. Nescio an hæ notæ stabiles sint, et interea hanc sicut subspeciem enumeravi.

Ar. Geog. Distributio fere eadem ac *V. agrestis.*

V. CYMBALARIA (*Bodard, Diss.*; *Bertol. Amœn. Ital.* 56; *DC. Pr.* x. 488).

Mar. sept.—Tanger! In monte Beni Hosmar pr. Tetuan!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

V. HEDERIFOLIA (*L., DC. Pr.* x. 488).

Mar. merid.—In Atlante Majore videtur frequens. In convalle Aït Mesan a 1400 m. usque 1600 m.! et iterum supra Arround circ. 2200 m.! et in jugo Tagherot usque 3000 m.! In monte Djebel Tezah circ. 2000 m.!

Spec. in convalle Aït Mesan circ. 1400 m. lecta insigniter villosa.

Ar. Geog. Europa omnis (arctica exclusa). Montes regionis Mediterraneæ. Ex Macaronesia non vidi. In America boreali forsan introducta.

BARTSIA (*L. Gen.* 730.)

B. VISCOSA (*L., Eng. Bot.* tab. 1045),=Eufragia viscosa (*Benth. in DC. Pr.* x. 543),=Trixago viscosa (*Rchb. Fl. Excurs.* 360).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Tetuan (*Webb Herb.*)!

Mar. occid.—Casa Blanca! Aïn el Hadjar haud procul Mogador (*J. D. H.*)!

Mar. merid.—Mesfioua! Mzouda!

Ar. Geog. Species imprimis occidentalis a Scotia et Hibernia usque Macaronesiam diffusa. In regione Mediterranea centrali et orientali minus frequens. In Brasilia australi verisimiliter introducta?

B. TRIXAGO (*L., Rchb. Ic. Fl. Germ.* xx. tab. 103),=Trixago apula (*Stev. Mem. Mosq.* vi. 4; *Benth. in DC. Pr.* x. 543),=Bartsia versicolor (*Pers. Syn.* ii. 151).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Tasseremout ad radices Atlantis Majoris!

Ar. Geog. Fere eadem ac *B. viscosæ*, sed magis australis. Regio omnis Mediterranea. In Gallia occidentali rara. Abyssinia. In Africa australi et in Brasilia australi videtur spontanea.

BARTSIA ASPERA (*Brot. Fl. Lus.* i. 185, sub *Euphrasia*; *Willk. et Lge. Fl. Hisp.* ii. 614, *in Obs.*), = Lasiopera aspera (*Lk. et Hffgg. Fl. Port.* tab. 59), = Odontites aspera (*Boiss. Voy. Esp.* 473), = Euphrasia asperrima (*Spreng. Syst.* ii. 777).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (Spec. ex herb. Schousboe benev. comm. cel. Cosson)!

Ar. Geog. Lusitania. Ager Tingitanus. Nisi fallor, etiam in Hispania occurrit.

Specimina Hispanica vidi, sed locum natalem non notavi.

Huic arcte affinis, et meo sensu sicut *B. asperæ* subspecies enumeranda est *B. spicata* (Ram. in Bull. Philom. xlii. 141, tab. 10; Benth. in DC. Pr. x. 545). Hæc est planta rupestris in Pyrenæis Gallicis rarissime obvia. Differt caule tenuiore flexuoso inferne nitido, nec rigido recto usque e basi aspero, parce ramoso, nec ramos plurimos abbreviatos floriferos edente, indumento totius plantæ molliore, floribus in spica laxiore dispositis, corollæ minus profunde divisæ tubo longiore, antheris minus exsertis, et capsula matura magis inflata.

B. PURPUREA (*Desf. Fl. Atl.* ii. 36, sub *Euphrasia*; *Don, Gen. Syst.* iv. 611, *et Benth. in DC. Pr.* x. 551, sub *Odontite*; *non Dub. Bot. Gall.* 354), = Euphrasia squarrosa (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Cel. Cosson specimen ex herb. Schousboe sub "*Euphrasia linifolia*" benev. communicavit!

In scheda spec. Schousbœani cel. Cosson adjecit "flores lutei," et inde sententiam confirmavit hanc cum proxime affini *B. granatensi* (Boiss. Elench. sub *Odontite*) ad subspecies *B. Garideli*, nob. (*Euphrasiæ viscosæ*, L.) reducendas esse.

Ar. Geog. B. purpurea Hispaniæ australis et Africæ borealis civis indigena est. Formæ arcte affines in peninsula Iberica, Gallia meridionali, et Pedemontio obviæ sunt.

Auctoritatem celebb. Bentham et Hooker (Gen. Plant. ii. 977) libenter assecutus species ab auctoribus sub *Bartsia*, *Eufragia*, *Trixagine*, et *Odontite* sub genere Linnæano *Bartsia* enumeravi. Inde necessitate rei coactus nomen novum pro *Euphrasia viscosa*, L., = *Odontites viscosa* (Rchb. et plur. auctt.) proposui, et nomen auctoris qui primus hanc stirpem descripsit et delineavit prætuli. Confer Garidel, Fl. Aix, 351, tab. 80.

OROBANCHACEÆ (*Lindl. Introd. Nat. Syst.*).

PHELIPÆA (*Desf. in Ann. Mus. Par.* x. 298).

P. CÆRULEA (*Vill. Dauph.* ii. 406, sub *Orobanche*; *C. A. M. Enum. Cauc.* 104; *Reut. in DC. Pr.* xi. 5), var.

Mar. merid.—Specimen unicum in convalle Aït Mesan legit J. D. H.!

Ar. Geog. Europa media et australis. Præter sp. nostrum ex Africa non vidi.

Specimen Hookerianum a typo differt calyce magis inflato, calycis dentibus angustis sinibus latis rotundatis divisis dente quinto brevissimo, corollæ labii inferioris lobis late ovatis vix aut ne vix acutis. Planta ulterius inquirenda.

P. SCHULTZII (*Mutel, Fl. Fr.* ii. 352, sub *Orobanche*; *Walp. Rep. Bot. Syst.* iii. 463; *F. Schultz, Arch. Fl. Fr. et All.* 99 et seq.),=P. lavandulacea (*Reut. in DC. Pr.* xi. 7, *pro parte*).

Mar. merid.—Ad radices Atlantis Majoris pr. Sektana legit J. D. H.!

Ar. Geog. Africa borealis. Hispania australis. Verisimiliter per regionem Mediterraneam diffusa, sed indicationes auctorum nimis incertæ.

P. MUTELI (*F. Schultz in Mutel Fl. Fr.* ii. 353; *Reut. in DC. Pr.* xi. 9; *Rchb. Ic. Fl. Germ.* xx. tab. 150).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (*Webb spec.*)!

Mar. merid.—Milhïan (*J. D. H.*)!

Ar. Geog. Per regionem Mediterraneam in radicibus Compositarum satis frequens. Ex Macaronesia non vidi.

—— ——, var. NANA, *Reut. l. c.*,=P. nana (*Rchb. fil.*; *Rchb. Icon. l. c.* tab. 151).

Mar. sept.—Legi prope Cap. Spartel!

Ar. Geog. In regione Mediterranea hinc inde.

P. LUTEA (*Desf. Fl. Atl.* ii. 60, tab. 146; *Reut. in DC. Pr.* xi. 13).

Mar. merid.—Legimus prope Misra ben Kara die decedente, adeo ut insertionem fibrillarum explorare non licuit!

Ar. Geog. Africa borealis et rarissime occurrit in Hispania australi. In Arabia etiam indicatur.

Specimina nostra quinquepedalia, thyrso bipedali et ultra.

P. TINCTORIA (*Willd. Sp. Pl.* iii. 352, sub *Orobanche*; *Walp. Rep. Bot. Syst.* iii. 462; *Reut. in DC. Pr.* xi. 13),=Lathræa Phelipæa (*L.*, *Brot. Fl. Lus.* i. 184),=Phelipæa lusitanica (*Coss. Not. Pl. Crit.* 43),=P. lutea (*Webb, It. Hisp.* 21, *et Salzm. Exsicc.*, *non Desf.*).

Mar. sept.—Tanger in arenosis ad ostium fluminis! Eodem ipsissimo loco legit b. P. B. Webb, et mihi sub "*P. lutea*" communicavit! Tanger (*Salzm. et Schousboe, sec. Reuter, l. c.*).

Ar. Geog. In regione litorali Lusitaniæ, Hispaniæ Gaditanæ, et ditionis Tingitanæ hinc inde obvia.

Hæc et *P. senegalensis* (Reut. l. c.), *P. luteæ* valde proximæ, forsan pro subspeciebus habendæ.

OROBANCHE (*L. Gen.* 779).

O. RETICULATA (*Wallr. Gen. Orob. Diasc.* 42; *Reut. in DC. Pr.* xi. 16).

Mar. sept.—In monte Beni Hosmar prope Tetuan, in radicibus *Cistorum* parasita! Huc etiam specimen prope Tetuan lectum a P. W. Webb sub *O. fœtida* (*Webb Herb.*)!

Ar. Geog. Hispania australis. Montes Tetuanenses.

O. FŒTIDA (*Desf. Fl. Atl.* ii. 59, tab. 144; *Reut. in DC. Pr.* xi. 18).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In arenosis prope Tanger in radicibus *Medicaginum*! Tetuan (*Webb spec.*)!

Mar. occid.—Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Prope Seksaoua!

—— ——, var. COMOSA, *nob.* Planta pedalis et ultra; spica densa crassa ex bracteis elongatis apice comosa; stigma truncatum biglobosum, stamina ut in typo ima basi pilosiuscula. Bracteæ insigniter cinereo-pubescentes.

Mar. merid.—Sektana ad radices Atlantis Majoris!

Ar. Geog. *O. fœtida* peninsulam Ibericam et Africam borealem incolit.

Var. nostra insignis est et facie *O. crinitæ* (Viv. Fl. Cors. Spec. Nov. 11) simillima, sed vix a specie divellenda videtur. *O. fœtida* est stirps valde ludibunda, et characteres stabiles quibus hanc ab *O. variegata*, Wallr., *O. densiflora*, Salzm., et *O. condensata*, Moris, distingueres vix inveniendi. Priores, cum *O. Hookeriana*, nob., sicut subspecies enumeravi, donec botanici qui eas in vivo sedule explorabunt meliora doceant.

O. variegata (*Wallr. Gen. Orob. Diasc.* 40; *Reuter in DC. Pr.* xi. 17).

Mar. sept.—Tanger (*Salzm. Exsicc.*, sub *O. strigosa*)!

Ar. Geog. Regio Mediterranea centralis. Europa media in calidioribus, sed nullibi frequens. Ex Hispania non vidi.

O. densiflora (*Salzm. Exsicc. MS.*; *Reut. in DC. Pr.* xi. 19), = O. crinita (*Rchb. Pl. Crit.* vii. fig. 922, *non Viv.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Ad ostium fluminis Tetuanensis (1851)! Specimen a G. Maw fere eodem loco lectum (1869) in Herb. Kew.!

Mar. occid.—Casa Blanca!

Ar. Geog. Hispania. Sardinia. Marocco.

Bracteæ in spec. nostris floribus nondum explicatis longiores (et inde spica junior comosa), demum floribus æquilongæ.

Orobanche Hookeriana, *nob., nov. sp.*

Planta subglaberrima, pedalis et ultra; squamæ elongatæ longiuscule acuminatæ, laxæ; spica mediocriter densa; bracteæ floribus explicatis dimidio breviores; calycis segmenta in lacinias breves subulatas divisa, in flore e basi spicæ utrinque adnata, in flore altero juniore tantum antice coalita; corolla atrorubens, laciniis calycinis duplo longior, insigniter bilabiata, labio superiore sinuato-denticulato, inferiore trilobo lobis rotundatis; stamina ima basi corollæ inserta, insigniter dilatata, basin versus pilosa; antheræ ad suturas glabræ; stigma capitato-bilobum.

Mar. merid.—In convalle Aït Mesan circ. 1300 m. legit J. D. H.! Specimen ad eandem formam referendum legi pr. Seksaoua!

O. fœtidæ affinis, differt glabritie, bracteis et calycis laciniis brevioribus, staminibus ima basi tubi corollini nec paullo supra basin insertis, antheris glabris. Specimen prope Seksaoua lectum differt tamen antheris villosulis et staminibus circ. ad quartam partem supra basin tubi corollini insertis.

O. PRUINOSA (*Lap. Suppl.* 87; *Reut. in DC. Pr.* xi. 19).

Mar. sept.—Tanger (*spec. unicum legit J. D. H.*)!

Mar. occid.—Rabat (*R. et Fr. spec. in Herb. Kew.*)! Casa Blanca!

Mar. merid.—Ad radices Atlantis Majoris. Sektana! Reraya (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. SPECIOSA, =O. speciosa (*DC. Fl. Fr. Suppl.* 395; *Reut in DC. Pr.* xi. 19; *non Walp. nec Dietr.*).

Mar. merid.—Specimen unicum legit prope Sektana J. D. H.!

O. pruinosa et *O. speciosa* a Reuter l. c. pro speciebus distinctis descriptæ, in Fl. Hispanica, ii. 622, a Willkomm et Lange ad synonyma reducuntur. *O. speciosa* mihi videtur prioris var. insignis floribus majoribus et paucioribus, labiis minus papyraceis, superiore rubro-cærulescente, squamis insuper crebrioribus et majoribus distinguenda. Nomen *O. speciosa* antiquus. Hæc tamen forma rarius obvia, dum *O. pruinosa* genuina late diffusa est.

Quoad characteres a sepalis desumptos—scilicet *O. pruinosa* sep. bifidis laciniis subæqualibus, et *O. speciosa* sep. indivisis vel raro inæqualiter bifidis—video inter spec. simul crescentia, immo inter flores ex eadem spica desumptos, sepala omnino variabilia, ludunt nempe laciniis æqualibus et inæqualibus, tubo corollino brevioribus, æqualibus, vel longioribus. In spec. Maroccanis sepala indivisa nunquam vidi. Pari modo bracteæ variant floribus breviores v. æquilongæ, et dum flores superiores nondum explicantur spica apice interdum comosa.

Ar. Geog. *O. pruinosa* per regionem Mediterraneam omnem (inclusa Macaronesia) late diffusa est. *O. speciosa* in Gallia meridionali et alibi indicatur, sed videtur satis rara.

OROBANCHE BARBATA (*Poir. Dict.* iv. 621; *Reut. in DC. Pr.* xi. 23, *non Rchb.*)?

Mar. sept.—Tanger in monte Djebel Kebir in radicibus *Cichoraceorum* parasita!

Mar. merid.—In regione inferiore Atlantis Majoris. Reraya! In convalle Aït Mesan circ. 1300 m.!

Ar. Geog. Peninsula Iberica. Imp. Maroccanum.

Specimina Tingitana Algarbianis (Bourg. Pl. Port. No. 2011) simillima. Atlantica statura multo majora, caule debili sesquipedali, sed vix diversa.

Species mihi aliquantulum incerta, hinc *O. pruinosæ*, illinc *O. minori*, Sutton, comparanda, illæ structura, huic facie propior. Stamina ostendit pilosa fere ad basin tubi corollini inserta inferne dilatata et incrassata. Bracteæ variant corolla breviores vel longiores, spica interdum, nec semper, apice comosa.

O. TETUANENSIS, *nob.*=O. condensata (*Ball MSS. olim, non Moris*).

Mar. sept.—In monte Beni Hosmar prope Tetuan die 12 Aprilis 1871 florifera lecta!

Planta subspithamæa; caulis cum squamis oblongo-linearibus subobtusis parce pilosus; spica densa; bracteæ lineares obtusiusculæ floribus sat magnis breviores; sepala lineari-lanceolata integra corolla dimidio breviora; corollæ sordide atropurpureæ labium superius subintegrum sinuato-denticulatum, inferius trilobum lobis subæqualibus; stamina ima basi corollæ inserta glaberrima; antheræ magnæ insigniter calcaratæ glaberrimæ; stylus sub apice parce glandulosus, stigma bilobum.

Primo aspectu *O. condensatæ* (Moris., St. Sard. El., Fl. Sard. iii. 247) subsimilis, sed sepalis angustis integris, bracteis brevioribus obtusis, staminibus et antheris glaberrimis videtur omnino distincta.

LENTIBULARIÆ (*Rich. Pl. Par.* i. 26).

PINGUICULA (*L. Gen.* 30).

P. LUSITANICA (*L., DC. Pr.* viii. 29).

Mar. sept.—Prope Tanger in monte Djebel Kebir (spec. ex herb. Schousboe benev. comm. cel. Cosson)!

Ar. Geog. Species occidentalis ex Hibernia usque fretum Herculis diffusa.

ACANTHACEÆ (*R. Br. Prod.* 472).

ACANTHUS (*L. Gen.* 793).

A. MOLLIS (*L., DC. Pr.* xi. 270).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Djebel Kebir! Prope Tetuan nondum florentem vidi!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia). In Asia Mediterranea rarissime obvius.

SELAGINEÆ (*Juss. Ann. Mus. Par.* vii. 71; *Lindl. Veg. Kingd.* 666, inclusis Globularieis).

GLOBULARIA (*L. Gen.* 112).

G. ALYPUM (*L., DC. Pr.* xii. 613; *Schousb. Gew. Mar.* 43).

Mar. sept.—Tanger (*Broussonnet ex Cavan. Anal. Cienc. Nat.*). Tetuan!

Mar. occid.—In monte Djebel Hadid haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In provinciis australioribus (*Schsb. l. c.*). Ad radices Atlantis Majoris et usque 1800 m. s. m. Ourika! Amsmiz (*J. D. H.*)! Reraya! In monte Djebel Tezah! Mtouga! (*R. & Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio fere omnis Mediterranea. Deest in ins. Canariensibus, et Maderæ dubia civis est.

VERBENACEÆ (*Juss. Ann. Mus. Par.* vii. 63).

VERBENA (*L. Gen.* 32).

V. OFFICINALIS (*L., DC. Pr.* xi. 547).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan! (*Webb Herb.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Sheshaoua! In ruderatis urbis Marocco!

Ar. Geog. Planta per orbem veterem (exclus. terris arcticis) vulgatissima. In America forsan introducta.

V. SUPINA (*L., DC. Pr.* xi. 548; *Schousb. Gew. Mar.* 4).

In ruderatis et arvis (loc. non indicato), *Schsb. l. c.*

Mar. sept.—Tetuan (*Webb spec.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia).

VITEX (*L. Gen.* 790).

V. AGNUS CASTUS (*L., DC. Pr.* xi. 684).

Mar. sept.—Prope Tanger vidi nondum florentem!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Secus rivulum ad fines prov. Shedma et Haba! Alibi in regione inferiore vidimus, sed raro. Oued en Fisk (*R. et Fr. sp. in Hort. Kew.*)!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

LABIATÆ (*Juss. Gen.* 110).

LAVANDULA (*L. Gen.* 711).

L. STŒCHAS (*L., DC. Pr.* xii. 144).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Djebel Kebir! Inter Tanger et Tetuan! In rupibus prope Tetuan!

Mar. occid.—Mogador (*Balansa spec.*)! In monte Djebel Hadid! Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

LAVANDULA PEDUNCULATA (*Cavan. Prælect.* 70; *DC. Pr.* xii. 144), = L. Stœchas, var. β (*L. Sp. Pl.* 800).

Mar. merid.—Ad radices Atlantis Majoris. In convalle Ourika circ. 1100 m.! Reraya ad 1000 m.!

Ar. Geog. Peninsula Iberica. Ins. Madera. Marocco meridionalis. Var. in Oriente.

L. DENTATA (*L., DC. Pr.* xii. 145).

Mar. sept.—Inter Tanger et Tetuan! In saxosis pr. Tetuan!

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Ourika! In convalle Aït Mesan usque 1400 m.!

—— ——, var. foliis arcte revolutis fere ut in *L. santolinoide*, Jaub. et Spach.

Mar. merid.—In convalle Amsmiz circ. 1300 m.!

Ar. Geog. *L. dentata* per regionem Mediterraneam occidentalem calidiorem ex Italia australi usque insulam Maderam dispersa est.

L. MULTIFIDA (*L., Benth. in DC. Pr.* xii. 147).

Mar. sept.—Inter Tanger et Tetuan!

Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe Cat.*). Prov. Haha pr. Mogador! Agadir (*Coll. Indig.* 1871)!

—— ——, var. **INTERMEDIA**, *nob.*

Mar. occid.—In monte Djebel Hadid haud procul Mogador! Prov. Haha!

Mar. merid.—In saxosis aridissimis prope Aïn Oumast! In planitie distr. Mesfioua!

—— ——, var. **ABROTANOIDES**, *nob.*, = L. abrotanoides (*Lam. Dict.* iii. 429; *Benth. in DC. Pr.* xii. 146).

Mar. merid.—In rupibus supra Seksaoua! Aïn Tarsil.

Ar. Geog. *L. multifida* in regione Mediterranea calidiore imprimis occidentali (scil. in peninsula Iberica, Calabria et Africa boreali) diffusa, in Ægypto etiam obvia est. Var. *abrotanoides* est forma Canariensis et Maroccana.

Notæ diagnosticæ quibus *L. abrotanoides* a *L. multifida* distinguitur mihi videntur omnes instabiles, nec desunt formæ mediæ, var. *intermediam* sistentes. Secundum cel. Bentham loc. cit. *L. multifida* differt spicis brevioribus plerumque simplicibus, nec sæpius quinatis, foliorum lobis acutis, nec obtusis, foliis floralibus basi latis extus villosis, nec ovato-lanceolatis acuminatis, calycibus demum valde tomentosis nec tenuiter puberulis. Spicas elongatas usque 3-pollicares vidi in spec. Algeriensibus et Hispanicis *L. multifidæ* genuinæ, et folia floralia in spec. Maroccanis angustiora quam in typo, fere eadem ac in *L. abrotanoidi* Canariensi. In spec. omnibus Marroccanis (Tingitanis exceptis) calyces tenuiter pubescentes dentium margine ciliati; foliorum laciniæ ludunt obtusæ vel acutæ.

Lavandula tenuisecta (*Coss. MSS.*), = L. abrotanoides, var. attenuata (*Ball, in Journ. Bot.* 1875, 174).

Rami tenues sulcati subglaberrimi superne aphylli; folia bipinnatifida laciniis obtusiusculis, ex pilis brevissimis rigidis scabriuscula; spica attenuata plerumque brevis solitaria; folia floralia (vel bracteæ) ovato-lanceolata acuminata basin versus pubescentia, calyce dimidio breviora; calyx eximie nervosus, tenuiter et vix puberulus, dentibus margine ciliolatis; corollæ tubus tenuior et paullo longior quam in *L. multifida.*

Mar. merid.—In regione inferiore et media Atlantis Majoris. Legimus in convalle Aït Mesan a 1400 m. usque 2200 m.! In monte Djebel Tezah usque 2100 m.! Specimina ex monte Djebel Ouensa ab indigeno Ibrahim lecta sub "*L. tenuisecta,* Coss." benev. communicavit cel. Cosson.

Characteres supra indicati in grege tam ludibundo non gravis momenti. Haud sine dubio hanc pro subspecie enumeravi. Pluribus notis *L. tenuisecta L. coronopifoliæ,* Poir., et *L. multifidæ* intermedia videtur, et specimina ex insulis Capitis Viridis in Herb. Kew. sub "*L. coronopifolia*" asservata nostris valde similia sunt.

MENTHA (*L. Gen.* 713).

M. SYLVESTRIS (*L., Benth. in DC. Pr.* xii. 166).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Sheshaoua (spec. mox floribundum legit J. D. H.)!

Ar. Geog. Regio omnis Mediterranea. Europa media. Asia temperata. In Africa australi forsan indigena; in America verisimiliter introducta.

M. ROTUNDIFOLIA (*L., Benth. in DC. Pr.* xii. 167).

Mar. merid.—In ascensu ad jugum Tagherot nondum florentem legerunt Rein et Fritsch!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Europa media. Asia temperata. Indigena, ut fertur, etiam in America boreali.

M. TIMIJA, *Coss. MSS.*

Mar. merid.—Legimus nondum florentem in convalle Ourika! Specimina florentia ex monte Djebel Afougueur ab indigeno Ibrahim lecta comm. Cosson.

Descriptionem hujus, aliarumque plurimarum sp. novarum, viro amicissimo, Floræ Africæ borealis magistro, commendamus.

M. PULEGIUM (*L., Benth. in DC. Pr.* xii. 175).

Mar. sept.—Vidi prope Tanger nondum florentem! El Araisch (*R. & Fr. spec. in Herb. Kew.*)!

Mar. merid.—In regione inferiore pluries visa. Legimus prope Misra ben Kara! et in distr. Mesfioua!

—— ——, var. VILLOSA (*Benth. loc. cit.*).

Mar. sept.—Prope Tetuan (1851)!

Ar. Geog. Species per regionem omnem Mediterraneam et Europam mediam, necnon in Abyssinia et in utraque America extratropica diffusa.

LYCOPUS (*L. Gen.* 33).

L. EUROPÆUS (*L., Benth. in DC. Pr.* xii. 178), = L. exaltatus (*Schousb. Gew. Marok.* 4, non *L.*).

Mar. sept.—Tanger (*Salzm. spec., ex Benth. l. c.*), (*Schsb. l. c.*).

Mar. occid.—Mogador (*Broussonnet, ex Benth. l. c.*).

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Europa media et borealis (exclusa arctica). Asia temperata.

Procul dubio planta a Schousbœo indicata ad formam *L. europæi* foliis inferioribus pinnatifidis referenda est.

ORIGANUM (*L. Gen.* 726).

O. COMPACTUM (*Benth. Lab.* 331, *et in DC. Pr.* xii. 192), = O. glandulosum (*Salzm. Exsicc. non Desf.*), = O. creticum (*Schousb. Herb., non L., nec Sieber*).

Mar. sept.—Tanger (*Salzm. Exsicc.*.)! (*Schousb. spec.*)! Tetuan (1851)!

Mar. merid.—Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Peninsula Iberica. Marocco.

THYMUS (*L. Gen.* 727).

T. SATUREIOIDES (*Coss. in Bull. Soc. Bot. Fr.* xx. 253).

Descriptionem cel. auctoris citare malui :—" Suffrutex 1–5 decim. altus, ramosissimus, dumosus, erectus vel diffusus, ramis vetulis tortuosis flexuosisve cortice rugoso rimoso cinereo-fuscescente, novellis breviter denseque pubescentibus. *Folia pleraque* in ramulos axillares *fasciculata* fasciculis ramorum vetulorum folio matrice orbatis, 4–9 millim. longa, *oblonga obtusa, inferne attenuata*, crassiuscula, *marginibus haud revolutis, nervis obsoletis*, ad basim utrinque pilis paucis rigidis ciliata, crebre glanduloso-punctata; *bractealia* herbacea, *lanceolata* acuta, calycibus subæquilonga, pubescentia, ciliata, plana. Verticillastri 6–10-flori, apice ramorum in spicas breves subcapitatas approximati. Calyx in pedicello cernuus, extus pube brevissima obtectus, intus ad faucem dense barbatus, subæqualiter bilabiatus, labii superioris ad tertiam partem tridentati dentibus ovato-lanceolatis lanceolatisve acutis, labii inferioris lineari-subulatis ciliatis. Corolla purpurea, tubo incluso. Stamina exserta, recta, distantia, didynama, inferioribus longioribus."

Mar. merid.—In regione inferiore Atlantis Majoris frequens, in regione media rara. In montibus prope Keira circ. 1000 m. detexit Balansa anno 1867 (*Coss. l. c.*). Legimus in convalle Aït Mesan usque 1400 m.! In convalle Amsmiz! Supra Seksaoua circ. 1100 m.! Ex provincia Mtouga (*R. et Fr. spec. in Herb. Kew.*)! In monte Djebel Tezah usque 1900 m.!

—— ——, var. PSEUDOMASTICHINA, *nob.* Foliis bractealibus et dentibus calycinis longe mucronatis corollæ subæquilongis, floribus læte roseis.

Mar. merid.—In convalle Ourika circ. 1100 m.! in convalle Aït Mesan!

Monente cl. auctore:—*T. satureioides*, foliorum fabrica in genere insignis, habitu *Satureiam* refert, et inde nomen, sed ad *Thymum* pertinet calyce bilabiato fauce dense villoso, staminibus distantibus, non ascendentibus."

In grege *T. vulgaris* collocandus.

THYMUS SERPYLLUM (*L., DC. Pr.* xii. 200), var. ATLANTICUS, *nob.* Differt a typo foliis elliptico-lanceolatis in petiolum brevissimum sensim attenuatis, apice obtusiusculis, eximie glanduloso-punctatis, florum verticillastris depauperatis in capitulum parvum laxum approximatis.

Mar. merid.—In regione alpina Atlantis Majoris, in jugo Tagherot, circ. 2900 m.!

Ar. Geog. Per Europam omnem (excepta peninsula Iberica australiore) a litore maris usque regionem glacialem summarum Alpium diffusus. Adest in montibus Asiæ mediæ et Abyssiniæ.

T. LANCEOLATUS (*Desf. Fl. Atl.* ii. 30, tab. 128; *Benth. in DC. Pr.* xii. 203), = T. Sibthorpii (*Benth. Lab.* 345), var. CRISPUS, *nob.*, = T. pallidus, *Coss. MSS.*

Planta nostra a typo differt foliis omnibus (floralibus exceptis) margine revolutis, floralibus (bractealibus) quam cætera paullo latioribus, floribus subminoribus, calycis labii inferioris dentibus eximie pectinato-ciliatis.

Mar. merid.—In regione inferiore Atlantis Majoris. Legimus in convalle Aït Mesan usque 1600 m. s. m.! In convalle Amsmiz circ. 1400 m.! Habui specimen ex monte Djebel Afougueur ab indigeno Ibrahim lectum, cui scheda "*T. pallidus,* Coss. MSS."

Ar. Geog. Africa borealis. Asia Mediterranea. Græcia.

Stirps variabilis, herba tota in spec. Orientalibus et in nostris pallide virens, in Algeriensibus plurimis quæ vidi minus pallida, et folia floralia cum calycibus subpurpurascentia. Calyx, ut monuit cel. Benth. l. c., et pariter fit in spec. nostris Maroccanis, variat labiorum dentibus longioribus brevioribusve, semper fauce eximie villosus. In tabula Fontanesiana folia floralia cæteris angustiora phytographus ostendit; in spec. Algeriensibus quæ vidi æquilata sunt, in nostris paululum latiora. Var. nostra ludit herba tenuiter puberula vel pilis crebris hirtula.

T. CAPITATUS (*Lk. et Hffgg. Fl. Port.* i. 123; *Benth. in DC. Pr.* xii. 204).

Mar. sept.—Tanger (*Broussonnet, ex Benth. l. c.*). Vidi nondum florentem, et spec. ex Herb. Schousboe benev. comm. cel. Cosson! Tetuan, nondum florens!

Ar. Geog. Regio Mediterranea calidior exclusa Macaronesia. Deest in Gallia et in Italia media ac boreali.

THYMUS BROUSSONNETII (*Boiss. Voy.* 492, tab. 141; *Benth. in DC. Pr.* xii. 205).

Mar. occid.—Mogador! (*Balansa spec.*)! (*Broussonnet ex Boiss. l. c.*) (*Lowe Cat.*). Prov. Haha ab urbe Mogador meridiem versus!

Mar. merid.—Prov. Shedma! Mskala! Mtouga! Seksaoua!

Fit rarior in terris interioribus a mari remotis. Descriptio Boissieriana ex planta culta, quam secutus est Bentham, spec. nostris non adamussim convenit. Caules video semper puberulos vel subtomentosos; folia subtus insigniter nervosa glabra, vel sæpius ex pube brevissima rigida scabrida; folia floralia ex basi lata ovata, calyces occultantia, semper hirtula et margine ciliata, demum læte colorata; calycis labium inferius superiore longius, dente medio majore; corollæ tubum elongatum extus pubescentem.

Species propria prov. austro-occidentalibus Imp. Maroccani nullæ nisi sequenti proxima. Planta insectis invisa in urbe Mogador ab incolis ad vestes conservandas adhibitur.

T. MAROCCANUS (*Ball in Journ. Bot.* 1875, 174). (Plate XXVII.)

Planta ramosissima, ramis suberectis; folia sessilia, elliptico-lanceolata, basin versus attenuata, æqualia, subglaberrima vel hirtula, floralia conformia viridia, vel rarius aliquantulum purpurascentia; flores in capitulo brevi laxo approximati; calycis labii superioris tridentati dentibus subæqualibus, inferioris sublongioris dentibus anguste cuneatis tubo fere duplo longioribus; corollæ tubo extus hirtulo quam calyx sesquilongiore, labio inferiore trilobo lobis rotundatis, medio lateralibus aliquid majore; stylus exsertus, stamina duo longiora subsuperans. Habitu ad *T. Broussonnetii*, Boiss., proxime accedit, sed præter alias notas foliis floralibus cæteris conformibus, et tubo corollæ multo breviore videtur probe distincta.

Mar. merid.—Ad radices Atlantis Majoris a 900 m. usque 1300 m. Tasseremout! Ourika! Reraya! In convalle Aït Mesan!

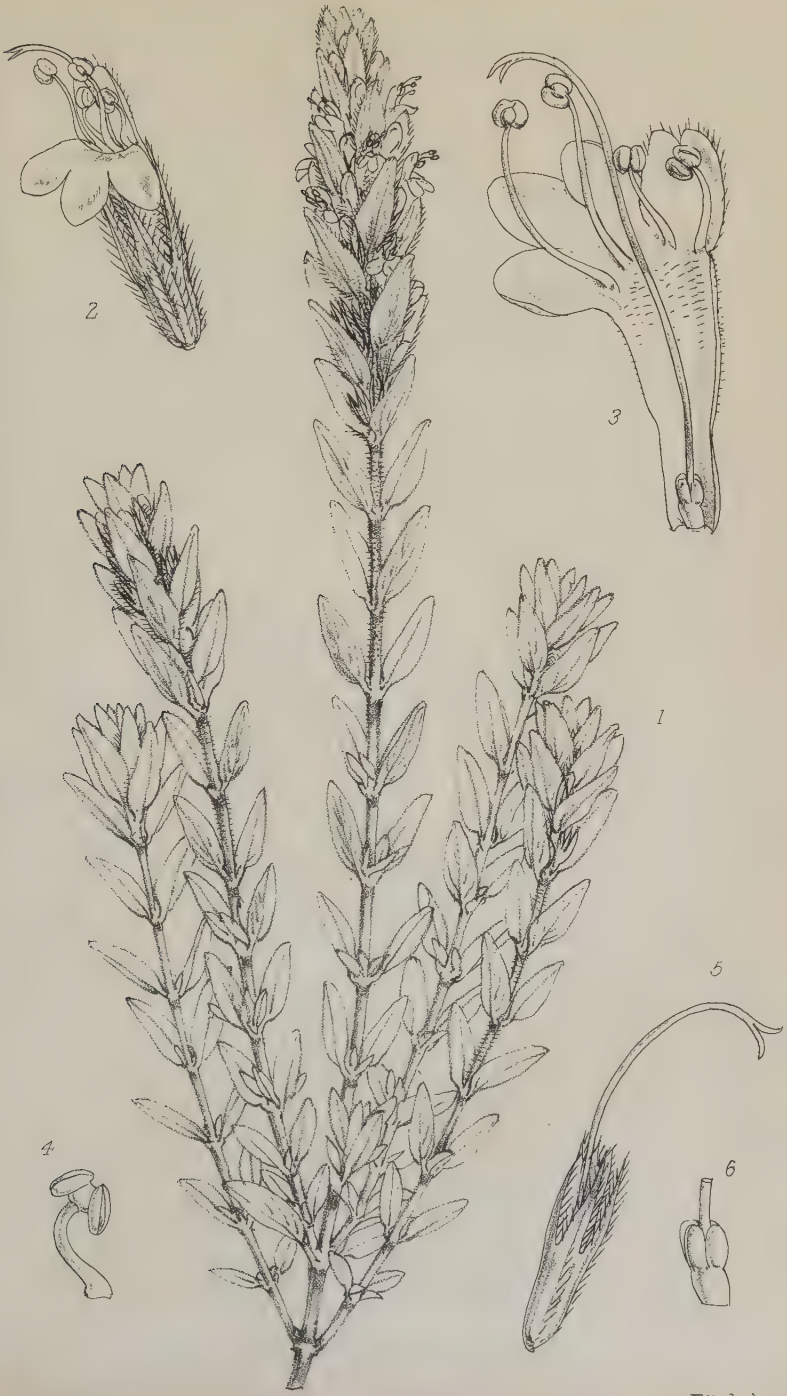
T. MUNBYANUS (*Boiss. et Reut. Pug.* 96),=T. ciliatus, var. Munbyanus, *De Noe.*

Mar. sept.—Inter Tanger et Tetuan! Frequens circa Tetuan, ubi legi 1851 et iterum 1871! et spec. habui ex herb. Webb.! In monte Beni Hosmar.

Proxime affinis *T. ciliato* (Desf. Fl. Atl. ii. 10, tab. 122, sub *Thymbra*; Benth. in DC. Pr. 205), a quo differt imprimis habitu, ramis sterilibus longis prostratis, floriferis erectis, foliis floralibus latioribus acuminatis eximie pectinato-ciliatis, calycis labio superiore profundius inciso-dentato. Pro subspecie enumeravi, dum formas intermedias non vidi.

Ar. Geog. Algeria occidentalis. Ditio Tetuanensis.

Thymi specimen nondum floriferum legit in monte Djebel Tezah cel. J. D. Hooker *T. satureioidi* subsimile, sed foliis non fasciculatis diversum. Planta ulterius inquirenda.



W.H.Fitch lith.

THYMUS MAROCCANUS *Ball.*

Fitch imp.

SATUREJA (*L. Gen.* 707).

S. INODORA (*Salzm. in Benth. Lab.* 353; *Benth. in DC. Pr.* xii. 210), = S. glomerata (*Schsb. MSS. in Herb.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (Spec. ex herb. Schousboe comm cel. Cosson)!

Ar. Geog. In utroque latere freti Herculis.

In Flora Hispanica non indicata; legi tamen in collibus prope S. Roque

HYSSOPUS (*L. Gen.* 709).

H. OFFICINALIS (*L., DC. Pr.* xii. 251).

Mar. merid.—In regione alpina Atlantis Majoris. Legimus in jugo Tagherot a 3000 m. usque 3200 m.! et in vertice Djebel Tezah ultra 3300 m.! Spec. in monte Djebel Ouensa ab indig. Ibrahim lecta benev. comm. Cosson!

Ar. Geog. In montibus regionis Mediterraneæ a Sierra Nevada Hispaniæ usque Persiam. In Europæ mediæ rupestribus calidioribus et in montibus Asiæ mediæ. Spec. Africana præter nostra non vidi.

MICROMERIA (*Benth. in Bot. Reg.* xv. No. 1283).

M. MICROPHYLLA (*D'Urv. Enum. Pl. Arch. in Mém. Soc. Linn. Par.* 327, sub *Thymo*; *Benth. Lab.* 377, *et in DC. Pr.* xii. 219).

Mar. merid.—Frequens in regione inferiore Atlantis Majoris. Tasseremout! Ourika! Aït Mesan! Aïn Tarsil! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa borealis. Italia australis. Insulæ Sicilia et Melita.

Planta ad Aïn Tarsil lecta sistit formam nanam dentibus calycinis brevissimis.

—— ——, var. VILLOSA (*Benth. l. c.*).

Mar. merid.—In rupibus supra Seksaoua! Keira (*Balansa, spec. in Herb. Kew*, sub *M. microphylla*, var. *S. filiformis*, Desf., *Coss.*)

Spec. nostra diagnosi et tabulæ *Saturejæ filiformis* (Dsf. Fl. Atl. ii. 8, tab. 121) omnino conformia. Præter indumentum a *M. microphylla* recedit calycis subbilabiati dentibus longioribus subulatis, et cymarum pedunculis dimidio brevioribus.

CALAMINTHA (*Mœnch, Meth.* 408).

C. MENTHÆFOLIA (*Host, Fl. Austr.* ii. 129), = C. adscendens (*Jord. Obs. Fragm.* iv. 8, tab. 1). Var. BÆTICA, *nob.*, = C. Bætica (*Boiss. et Reut. Pug.* 92).

Mar. sept.—Legi in monte Djebel Kebir prope Tanger! Tanger (*Salzm. Exsicc.*, sub *Thymus Calamintha*, testibus Boissier et Reuter l. c.).

Ar. Geog. C. menthæfolia est species per Europam imprimis australem late diffusa. Var. nostra, quam legi in rupibus Calpes, videtur Hispaniæ, Lusitaniæ et Africæ Tingitanæ propria civis, nisi forte huc referenda sit stirps Canariensis sub *C. officinali β, villosissima* in DC. Prod. l. c. memorata.

Consentientibus plerisque auctoribus *C. menthæfolia*, Host, est ipsissima *C. officinalis*, Benth. non Mœnch, dum *C. officinalis*, Mœnch, foret eadem ac *C. sylvatica* (Bromf. in Eng. Bot. Suppl., tab. 2897, Benth. in DC. Pr. l. c.). An hæ stirpes pro speciebus distinctis habendæ sint est mihi res adhuc incerta. Varietati nostræ valde proxima est *C. heterotricha* (Boiss. et Reut. Pug. 93), ad varietatem *C. menthæfoliæ* forsan reducenda.

CALAMINTHA ACINOS (*L.*, sub *Thymo* ; *Benth. in DC. Pr.* xii. 230),= Acinos vulgaris (*Pers. Syn.* ii. 131).

Mar. merid.—Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Europa media et australis. Regio Caucasico-Caspica.

C. GRAVEOLENS (*M. B. Fl. Taur.-Cauc.* ii. 60, sub *Thymo* ; *Benth. in DC. Pr.* xii. 231).

Mar. merid.—In convalle Aït Mesan ad 1700 m. s. m.!

Ar. Geog. Regio fere omnis Mediterranea, imprimis orientalis. Adest etiam in Europa orientali. In Macaronesia nondum detecta.

C. ALPINA (*L.*, sub *Thymo* ; *Benth. in DC. Pr.* xii. 232), var. PARVIFLORA, *nob.*

Mar. merid.—In regione media et superiore Atlantis Majoris. In convalle Aït Mesan et in ascensu jugi Tagherot a 2200 m. usque 2800 m.! In monte Djebel Tezah circ. 2500 m.! In convalle Ourika spec. legit J. D. H.!

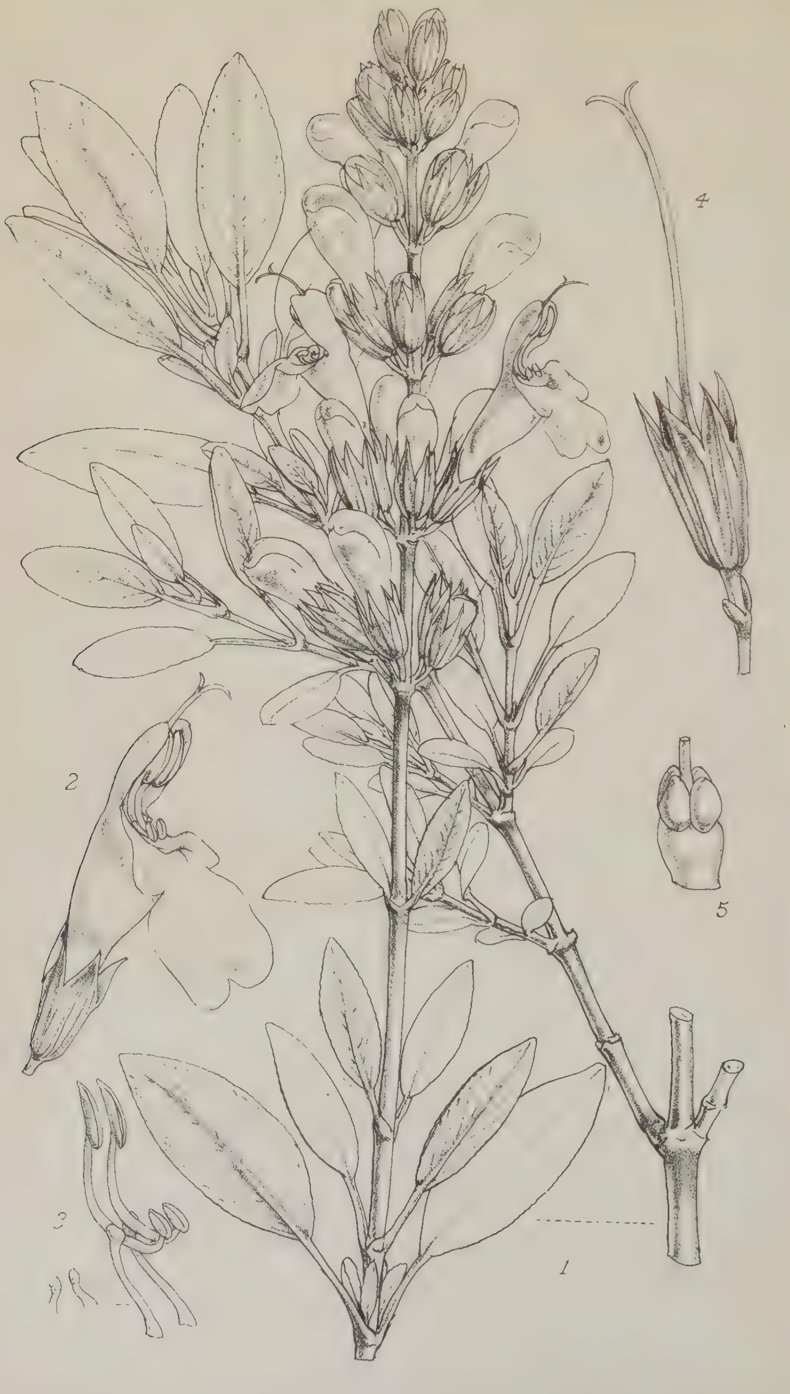
Radix perennis lignosa, caules tenues prostratos purpurascentes emittens; folia petiolata integerrima vel obsolete denticulata; verticillastri pauciflori, ad apicem ramorum approximati ; calyx ad quartam partem, interdum usque ad medium, fissus, labii inferioris longioris dentibus rectis v. subrecurvis subulatis, superioris dentibus ex basi triangulari acuminato-subulatis demum patentibus; corolla parva calyce vix duplo longior.

Ar. Geog. *C. alpina* per montes Europæ mediæ et australis late diffusa. In Asia Minore etiam indicata.

C. ATLANTICA (*Ball in Journ. Bot.* 1875, 175).

Humilis, valde ramosa, ramis adscendentibus prostratisve, interdum radicantibus; folia parvula longiuscule petiolata, late ovata, obtusa, subintegerrima, obscure crenulata ; verticillastri subsexflori, interdum unicus solitarius terminalis, interdum 2, approximati ; bracteæ subulatæ calyce breviores ; calyx bilabiatus, usque ad medium vel ultra fissus, dentibus labii superioris ultra medium coalitis, lab. inferioris subulatis incurvatis ; corollæ parvulæ tubo calycis dentibus vix æquilongo.

Mar. merid.—In Atlante Majore a 1200 m. usque 2400 m. Legimus in convalle Ourika! Aït Mesan supra Arround! In monte Djebel Tezah!



W.H.Fitch lith. SALVIA MAURORUM *Ball.* Fitch i

Statura multo minore, ramis debilibus fere prostratis, verticillis paucifloris et corollis parvis a *C. Clinopodio* insigniter differt; structura tamen vix satis distincta. Formam fere intermediam descripsit clar. Lange, *C. Clinopodium β, gracilis* (Lange, Pug. 177; Willk. et Lge. Fl. Hisp. ii. 416). Proxime affinis est etiam *C. Arundana* (Boiss. Voy. Esp. 498, tab. 145, sub *Melissa*; Benth. in DC. Pr. l. c.) species non satis nota, quæ ex descript. a nostra differt tantum foliis acutis dentatis et florum verticillis globosis. Interea planta nostra sicut subspecies enumeranda videtur, quacum forsan adsocianda erit varietas Langeana supra memorata.

SALVIA (*L. Gen.* 39).

S. MAURORUM (*Ball in Journ. Bot.* 1875, 175). (Plate XXVIII.)

Proxima *S. Candelabro* (Boiss. El. 72; Benth. in DC. Pr. xii. 263), cui sicut subspecies adsocianda, sed plurimis notis diversa. In nostra folia dimidio minora, rigidiora, superne lævia, margine integerrima; inflorescentia simplex, nec paniculata, ex cymis subtrifloris oppositis, sessilibus vel breviter pedunculatis, verticillos laxos paucifloros efformantibus; calycis breviter pedicellati, minute puberuli, vix aut ne vix glanduloso-viscosi dentes subæquales acuti mucronati; corolla gracilior, extus vix pilosa.

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Amsmiz circ. 1500 m.! In monte supra Seksaoua ad 1600 m.!

S. Blancoana (Webb et Held. in Blanco Pl. Jaen, No. 308), species dubia, a Willk. et Lge in Prod. Fl. Hisp. prætermissa, plantæ nostræ affinis est, et me judice inter subspecies *S. Candelabri* adnumeranda. Hæc gaudet panicula ramosa, floribus in cymis contractis pedunculatis, subsessilibus, calycis pilosi dentibus longioribus acutioribus. Hæ omnes a *S. officinali*, L., et *S. lavandulæfolia*, Vahl, præter alias notas, bracteis minimis ovali-acutis cito deciduis, nec late ovatis longiuscule acuminatis subpersistentibus, dignoscuntur.

S. INTERRUPTA (*Schousb. Gew. Marok.* 6, tab. 1; *Benth. in DC. Pr.* xii. 266).

Mar. merid.—In monte Beni Hosmar pr. Tetuan legit G. Maw, anno 1869, et spec. unicum nondum florens legit J. D. Hooker 12 Aprilis 1871!

Mar. occid.—Specimen ex monte Djebel Hadid haud procul Mogador ab indigeno Ibrahim lectum humanissime comm. cel. Cosson! In eodem monte verisimiliter legit b. Schousboe semina in horto Hafniensi culta, unde specimen in opere citato delineatum.

Species Imp. Maroccani propria et verisimiliter rara. In regione inferiore Atlantis nullibi obvia.

[*S. viridis* (L., Benth. in DC. Pr. xii. 277), verisimiliter ex errore, schedæ Salzmannianæ, prope Tanger l. c. indicatur. Hæc species, a nemine recentiorum in agro Tingitano visa, prope Malaga a Salzmann lecta fuit, et specimen Malacitanum facile sub rubrica "Tanger" evasit.]

[*S. tingitana* (Etl. Salv. No. 30; Benth. in DC. Pr. xii. 282) est planta Tunetana cui nomen falsum erronee attributum. Facile tamen in territorio Maroccano invenienda erit, dum adest in agro Gaditano. Hæc est *S. fœtida* (Lam. Ill. i. 69) et *S. coarctata* (Vahl, Enum. i. 277). Nomen triviale Lamarckianum aptum et Vahliano antiquius videtur hodie anteferendum.]

SALVIA ARGENTEA (*L., Benth. in DC. Pr.* xii. 288).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Videtur satis frequens in regione inferiore. Aïn Oumast! Shedma! Ourika (*R. et Fr. spec. in Herb. Kew.*)! Sektana (*R. et Fr. spec. in Herb. Kew.*)! Vidi etiam prope Seksaoua!

Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia). Deest in Gallia et in Italia media ac superiore.

S. BICOLOR (*Desf. Fl. Atl.* i. 22, tab. 2; *Bot. Mag.* tab. 1774; *Benth. in DC. Pr.* xii. 288; *Schousb. Gew. Marok.* 5). Hujus lusus est *S. dichroa* (Hook. fil. in Bot. Mag. xcviii. tab. 6004).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schsb. l. c.*). (*Broussonnet ex Benth. l. c.*).

Ar. Geog. Stirps insignis in regione litorali Africæ borealis rara, et in Hispania Bætica rarissima.

Circa Tingim sat frequens et valde ludibunda. Planta macrior 8–9-pedalis gaudet foliis circuitu late ovatis basi profunde cordatis, inferioribus pedem et amplius longis lobato incisis, ex lobis inferioribus sese tegentibus pseudopeltatis, caulinis inferioribus petiolatis, pinnatifido-lobatis, laciniato-dentatis, supremis subsessilibus. In speciminibus minoribus folia inferiora oblongo-lanceolata, basi truncata, parce dentata, interdum integerrima. Ex radice prope Tingim (nec ad radices Atlantis Majoris) lecta enata est *S. dichroa*, H. fil., lusus sp. nostræ, foliis basi truncatis subintegris, corollæ labio roseo.

Schousboe plantam jam defloratam mense Aprili prope Tingim vidit. Ego legi adhuc copiose florentem mense Junio 1871 in dumetis juxta urbem et in clivo montis Djebel Kebir.

S. algeriensis (Desf. Fl. Atl. i. 23, tab. 3; Benth. l. c.) foliis angustioribus (non semper ut in tabula citata integris) et floribus minoribus a *S. bicolori* distincta, forsan melius sicut subspecies enumeranda est.

S. OCHROLEUCA (*Coss. in Bull. Soc. Bot. Fr.* xx. 254).

Planta a me non visæ descriptionem auctoris citare licet:—

"Plantis *perennis*, caudice lignoso tortuoso. Caules circiter 20 centim. longi, erecti, herbaceo-subindurati, villosi pilis patentibus immixtis brevioribus glanduliferis. *Folia* bullato-rugosissima, utrinque, sed infra densius, pubescenti-velutina; radicalia plura rosulata, *humo haud* *adpressa,* abrupte petiolata, ambitu *ovato-oblonga oblongave, plus minus inciso-pinnatifida,* lobis ovatis oblongisve obtusissimis inciso-crenatis; caulina 2–4, sessilia, subconformia; *floralia* sessilia, *ovata acuminata, calycibus paulo longiora vel breviora,* villosa. Racemi simplices, verticillastris 4–7-floris, sæpius caulem a tertia parte inferiore obtinentibus, inferioribus remotiusculis, superioribus approximatis. *Calyx* subsessilis, hirsuto-villosus pilis longis glanduliferis, campanulatus tubo brevi, *labiis* subæquilongis *distantibus, superiore* oblongo *summo apice 3-dentato dentibus* ovato-acuminatis subæqualibus *conniventibus, inferiore bifido laciniis lanceolatis* in cuspidem subspinescentem attenuatis, tubo intus villoso. *Corolla ochroleuca* 10–15 millim. longa, calyce subduplo longior, *tubo infra faucem gibboso-ventricoso intus annulo piloso destituto, labio superiore arcuato* galeato compresso apice rotundato emarginato extus pubescente, *labii inferioris* superiori subæquilongi *lobis lateralibus* oblongis *suberectis* medio patente concavo rotundato subemarginato. *Connectiva inter se extremitate articulorum inferiorum connata, multo infra medium articulata, articulo superiore elongato lobo antheræ* versatili oblongo *donato, articulo inferiore* crasso *ad callum* sterilem *reducto.* Stylus apice bifidus, lobis subulatis inferiore multo longiore. Florifera Maio 1867 lecta."

Mar. merid.—In montibus ad austro-occidentem urbis Marocco, prope Keira, ad 1000 m. el. Balansa detexit. Nos non vidimus.

"*S. ochroleuca* calycis labio superiore summo apice tridentato dentibus conniventibus, corollæ tubo sub fauce gibboso-ventricoso intus exannulato, labio superiore arcuato galeato compresso, labii inferioris lobis lateralibus oblongis suberectis medio patente rotundato concavo subemarginato, connectivis multo infra medium articulatis inter se extremitate articuli inferioris sterilis ad callum reducti connatis ad sectionem *Plethiosphace* (Benth. in DC. Prod. xii. 288) pertinet et juxta *S. Austriacam,* L., colore corollæ collocanda, sed habitu, foliis multo angustioribus haud humo adpressis et forma dentium calycinorum eximie distincta."

SALVIA VERBENACA (*L., Benth. in DC. Pr.* xii. 294), var. OBLONGIFOLIA (*Benth. l. c.*), = S. oblongata (*Vahl, Enum.* i. 256), = S. betonicæfolia (*Lam. Ill.* i. 70).

Mar. occid.—Agadir (*Coll. Indig.* 1871)! In via qua itur a Mogador versus Shedma (*G. Maw spec.*)!

Mar. merid.—In prov. Shedma pluribus locis! In saxosis aridissimis prope Aïn Oumast!

—— ——, var. PRÆCOX (*Lange, Pug.* 179; *Willk. et Lge. Fl. Hisp.* i. 426), = S. clandestina (*L., Benth. in DC. Pr. l. c.*; *Schousb. Gew. Marok.* 5).

Mar. sept.—Tanger (*Schsb. l. c.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In convalle Aït Mesan! a 1400 m. usque 2400 m.! Prope Seksaoua.

Ar. Geog. S. Verbenaca genuina per Europam fere omnem a Suecia usque litora Maris Interni diffusa est et prope Byzantium indicatur. Var. *oblongifolia* in Hispania et Africa boreali obvia est. Var. *præcox* (*S. clandestina*) per regionem omnem Mediterraneam a Persia usque Macaronesiam frequens occurrit.

SALVIA TARAXACIFOLIA (*Coss. in Bull. Soc. Bot. Fr.* xx. 253; *Bot. Mag.* xcviii. tab. 5991).

Sequitur descriptio Cossoniana:—

"Planta *perennis,* caudice lignoso tortuoso. Caules 5–25 centim. longi, erecti vel ascendentes, herbaceo-indurati, villosi pilis patentibus latis immixtis pilis brevioribus tenuioribusque glanduliferis. *Folia* radicalia plura rosulata, humo haud adpressa, pubescentia arachnoidea supra subcanescentia, *infra cano-tomentosa,* petiolata, *pinnatipartita vel pinnatisecta,* lobis 3–4-jugis ovatis oblongisve grosse dentatis rarius subintegris terminali majore; caulina pauca 2–4, subconformia, sæpe nulla; *floralia* persistentia, sessilia, *ovata in cuspidem spinescentem acuminata, calyces subæquantia vel breviora,* dorso lanata, margine ciliata. Racemi simplices, verticillastris 4–7-floris sæpius caulem a tertia parte inferiore obtinentibus, inferioribus remotis, superioribus subapproximatis. *Calyx* arachnoideo-lanatus pilis longioribus immixtis, tubuloso-campanulatus, coriaceus venulis anastomosantibus reticulato-venosus, *labio superiore truncato 3-dentato* inter dentes plano-subconcavo dente medio breviore, inferiore bifido, *dentibus omnibus patulis cuspide subulata spinescente terminatis, tubo* intus sed *præsertim ad faucem dense barbato. Corolla* pallide purpurascens?, 2–3 centim. longa, calyce subtriplo longior, *tubo amplo* intus *ad tertiam partem inferiorem annulo pilorum donato,* labio superiore vix arcuato galeato compressiusculo extus pubescente, *labii inferioris* superiori subæquilongi *lobis lateralibus* late *ovato-rotundatis* medio obovato-rotundato emarginato patente subconcavo. *Connectiva inter se libera,* elongata, *paulo infra medium articulata articulo utroque lobum antheræ gerente,* articuli superioris lobo oblongo-lineari adnato, articuli inferioris crassioris lobo breviore oblongo. Stylus apice bifidus lobis subulatis inferiore paulo longiore. Nuculæ fuscæ, nitidæ, obovato-subglobosæ."

Mar. merid.—In glareosis torrentium ad radices Atlantis Majoris. Tasseremout! Ourika! Reraya (*R. et Fr. spec. in Herb. Kew.*)! In montibus ad meridiem urbis Maroc. prope Mulai-Ibrahim, ad 1000 m. cl. Balansa anno 1867 primus detexit; altero loco ignoto eorundem montium mulio Ibrahim auspice cl. Beaumier anno 1873 legit.

Monente cel. auctore:—"*S. taraxacifolia* calyce campanulato dentibus acutis patentibus maturatione haud mutatis, corollæ tubo amplo exserto intus piloso-annulato, labio superiore vix arcuato, labii inferioris lobis lateralibus patentibus medio late emarginato ad sectionem *Eusphace* (Benth. in DC. Prod. xii. 263) accedit, sed forsan melius ob connectivorum fabricam ad sectionem *Heterosphace* (Benth. in DC. Prod. xii. 350) referenda."

Species distinctissima prope *S. scabram*, Thunb., ut mihi videtur, collocanda. Corolla pallide, vel interdum saturate, purpurea.

SALVIA ÆGYPTIACA (*L., Benth. in DC. Pr.* xii. 355).

Mar. merid.—Legimus in alveo glareoso torrentis Oued en Fisk prope Gurguri! Spec. ab indigeno Mardochæo in Oasi Akka lectum comm. cel. Cosson!

Ar. Geog. Regio Mediterranea calidior. In Oriente et in Africa boreali, nec in Europa occurrit.

NEPETA (*L. Gen.* 710).

N. MULTIBRACTEATA (*Desf. Fl. Atl.* ii. 11, tab. 123; *Benth. in DC. Pr.* xii. 374).

Mar. sept.—Prope Tetuan (*Maw spec. in Herb. Kew.*)!

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Shedma! Aït Mesan circ. 1300 m.! Prope Mzouda! Prov. Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Africa boreali-occidentalis. Lusitania australis. Specimina Algeriensia a Maroccanis et Lusitanicis aliquid diversa sunt foliis basi latioribus, caule simplici nec ut in nostris sæpe ramoso.

N. Apulei (*Ucria in Guss. Prod. Fl. Sic.* ii. 80; *Benth. in DC. Pr.* xii. 375),=N. tuberosa (*Desf. Fl. Atl.* ii. 10, non *L.*),=N. rosea (*Salzm. Exsicc.*),=N. acerosa (*Webb, It. Hisp.* 20).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb spec.*)!

Mar. occid.—Mogador (*Lowe Cat.*). Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Ad radices Atlantis Majoris haud infrequens. Mesfioua! Tasseremout! Ourika! et alibi visa.

Ar. Geog. Africa boreali-occidentalis. Hispania australis. Sicilia.

N. Apulei a *N. multibracteata* differt foliis oblongo-lanceolatis, nec ovatis basi cordatis, caulinis fere omnibus sessilibus, spica tenuiore et bracteis oblongo-lanceolatis, nec lineari-subulatis. Hæ notæ tamen variabiles, et occurrunt spec. *N. multibracteatæ* a *N. Apulei* ægre distinguenda. Hanc ego pro subspecie enumeravi, et eodem pacto *N. reticulata* (Desf. Fl. Atl. ii. 11, tab. 124), in ditione nostra nondum detecta, mihi videtur subspecies *N. tuberosæ* (L., Benth. l. c.).

N. ATLANTICA (*Ball in Journ. Bot.* 1875, 175).

Ex radice lignosa caules plurimos erectos, 1–2 pedales, simplices vel breviter ramosos emittens; folia parva, breviter petiolata, ex basi truncata cuneato-ovata, in pagina inferiore insigniter nervosa, margine crenata, superiora sessilia, floralia minima, omnia tenuiter velutina; verticillastri remoti, cymis breviter pedunculatis sub 7-floris, bracteis minutis lineari-lanceolatis; calyx ore obliquo, dentibus inæqualibus, sæpius coloratis, cuneatis, tubi tertiæ vel quartæ parti æquilongis; corolla pallide ochroleuca, tubo vix exserto.

Mar. merid.—Legimus in convalle Amsmiz 1200–1400 m.! Spec. ex monte Djebel Afougueur ab indigeno Ibrahim lecta comm. cel. Cosson, sub *N. atlantica*, Coss. MSS.

Nostræ proxima est *N. marifolia*, Boiss. et Huet in Diagn. Pl. Or., ser. 2, fasc. iv. p. 24. In hac verticillastri florum approximati, calyx major, dentibus brevioribus et minus acutis, folia magis rugosa, bracteæ breviores et simul latiores, corolla denique gaudet tubo duplo longiore. *N. racemosa* (Lam., Benth. in DC. Pr. xii. 385), species etiam affinis, differt præter alias notas statura multo majore, corollæ tubo longiore, foliis et floribus duplo majoribus.

PRUNELLA (*L. Gen.* 735), interdum BRUNELLA.

P. VULGARIS (*L. Sp. Pl.* 837),=Brunella vulgaris (*Benth. in DC. Pr.* xii. 410).

Mar. sept.—Prope Tanger (*Webb Herb.*)! (*Salzm. Exsicc.*)!

Ar. Geog. Species cosmopolita in temperatis totius fere Orbis late diffusa; in Asia usque Japoniam, in America boreali et in montibus reg. æquinoctialis, et in Australia.

CLEONIA (*L. Gen.* 736).

C. LUSITANICA (*L., Benth. in DC. Pr.* xii. 411).

Mar. sept.—Tanger (*spec. ex Herb. Schousboe*)!

Mar. merid.—Ad radices Atlantis Majoris. Tasseremout! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Peninsula Iberica. Algeria. Marocco.

SIDERITIS (*L. Gen.* 712).

S. GRANDIFLORA (*Salzm. Pl. Exsicc. Ting.*; *Benth. in DC. Pr.* xii. 441).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Dersa pr. Tetuan (*Webb spec.*)!

Ar. Geog. Africa Tingitana et (rarissime) in Hispania australi.

S. SCORDIOIDES (*L., Benth. in DC. Pr.* xii. 442), var. ANGUSTIFOLIA (*Benth. l. c.*),=S. hyssopifolia (*L. Sp. Pl.* 803),=S. hyssopifolia, var. angustifolia (*Willk. et Lge. Fl. Hisp.* ii. 453).

Mar. occid.—? In monte Djebel Hadid haud procul Mogador (*R. et Fr.*

spec. in Hort. Kew.). Specimen incertum forsan melius sub var. *elongata* (Benth. l. c.) enumerandum.

Mar. merid.—? Spec. caule florifero anni præcedentis exsiccato legi in regione alpina montis Djebel Tezah!

Ar. Geog. Species per montes Hispaniæ, Italiæ, et Galliæ australis, necnon Alpes occidentales late diffusa. In Sicilia a Gussone indicata.

Specimina nostra nimis incompleta, forsan potius ad *S. incanam* referenda, rami tamen juniores cum foliis novellis subglaberrimi. Notæ quibus *S. hyssopifolia* a *S. scordioide* distinguitur mihi videntur nimis inconstantes, et formæ plurimæ intermediæ obviæ sunt.

SIDERITIS HIRSUTA (*L., Benth. in DC. Pr.* xii. 444).

Mar. merid.—Ad radices Atlantis Majoris prope Tasseremout!

Ar. Geog. Europa australi-occidentalis a Pedemontio usque Lusitaniam. Marocco. Var. in Algeria. Spec. typica Africana præter nostra non vidi.

S. ROMANA (*L., Benth. in DC. Pr.* xii. 445).

Mar. sept.—Legi juxta Tetuan anno 1851!

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia).

S. MONTANA (*L., Benth. in DC. Pr.* xii. 446), var. calycis tubo patule et molliter villoso.

Mar. merid.—In saxosis supra Seksaoua!

Ar. Geog. Species in regione tota Mediterranea (exclusa Macaronesia) et in Europa orientali late diffusa.

S. VILLOSA (*Coss. in Bull. Soc. Bot. Fr.* xx. 255).

Sequitur descriptio Cossoniana:—

"Planta *perennis* caudice et parte inferiore caulium induratis, *pilis patentibus molliter villosa.* Caules plures, diffusi, 10–15 centim. longi, tetragoni angulis præminentibus obtusis, simplices vel inferne ramosi. *Folia crenata, crenis etiam in superioribus muticis,* inferiora petiolata ovata vel ovato-oblonga basi cordata, *floralia subconformia* minora in petiolum brevem attenuata calycibus longiora. *Verticillastri* 3–6-flori, *remotiusculi vel superiores in spicam foliatam subapproximati. Calyx* breviter pedicellatus, demum patenti-subreflexus, patule hispidus, campanulatus, *tenuiter* 10-*nervius, dentibus omnibus subæquilatis, ovato-triangularibus apice mucronatis,* superiore longiore, tubi longitudine dimidia brevioribus, *demum suberectis.* Corolla 8–9 millim. longa, albida, sparse pilosa, tubo cylindrico, subrecto, calycem paulo excedente, intus piloso-annulato, labio superiore subascendente planiusculo integro, labio inferiore subæquilongo patente trilobo lobo medio latiore obovato integro. Stamina 4, tubo inclusa, superiora brevia antherarum lobis divaricatis, inferiora multo longiora antheris minutis crassis. Stylus inclusus, apice bifidus, lobo superiore tereti-truncato, inferiore dilatato basi superiorem amplectente. Nuculæ fuscescentes albido-variegatæ, obovatæ, apice rotundatæ, glabræ, punctato-tuberculatæ."

Mar. merid.—Frequens in regione inferiore ac media Atlantis Majoris. In convalle Ourika! In convalle Aït Mesan usque in ascensu jugi Tagherot a 1400 m. ad 2700 m.! In monte Djebel Tezah circ. 1800 m.! In monte Sidi Fars pr. Moulaï Ibrahim primus detexit cl. Balansa.

Monente cel auctore, "ad sectionem *Hesiodia* (Benth. in DC. Prod. xii. 445) pertinens et juxta *S. montanam*, L., collocanda, sed ab illa et cæteris speciebus sectionis caudice perenni distincta."

Specimina ex regione subalpina gaudent caulibus longioribus tenuioribus subprostratis, foliis majoribus minus villosis viridibus, caulinis latioribus inferioribus basi cordatis.

Hæc stirps habitu et foliorum forma *Stachyem circinatam* aliquantulum refert. A charactere generico paululum recedit styli lobo inferiore minus dilatato superiorem vix amplectente.

SIDERITIS COSSONIANA, *nob.*,=S. Balansæ (*Coss. in Bull. Soc. Bot. Fr.* xx. 256, *non Boiss. Diagn. Pl. Or.* ser. 2, iv. 35).

Dum nomen inventoris ad speciem alienam jam relatum est hanc stirpem novam cognomine cel. auctoris, floræ nostræ optime merentis, decorare juvat. Descriptionem auctoris citare malui:—

"Planta *annua*, pilis patentibus molliter villosa, a basi ramosa. Caules 12–15 centim. longi, tetragoni angulis præminentibus obtusis, laterales diffusi vel ascendentes, centralis erectus, simplices vel ramis paucis donati. *Folia crenata crenis muticis vel in foliis superioribus crena terminali brevissime cuspidata*, inferiora breviter petiolata ovata basi cuneata, *floralia subconformia* minora subsessilia calycibus sublongiora. *Verticillastri* 4–6-flori, *inferiores* sæpius *remoti, superiores in spicam foliatam subapproximati. Calyx* breviter pedicellatus, demum patenti-subdeflexus, patule hispidus, campanulatus, *tenuiter* 10-*nervius, dentibus omnibus subæquilatis subæquilongisque, ovato-lanceolatis apice in cuspidem longam subulatam attenuatis*, tubi longitudine dimidia paulo longioribus, *demum suberectis.* Corolla 6–7 millim. longa, albida, sparse pilosa, tubo cylindrico, subrecto, calycis tubum excedente, dentes subæquante, intus obsolete piloso-annulato, labio superiore subascendente planiusculo integro, labio inferiore longiore patente trilobo lobo medio latiore obovato integro. Stamina 4, ad tertiam partem inferiorem tubi corollini inserta, tubo inclusa, superiora breviora antherarum lobis divaricatis, inferiora longiora antheris minutis cassis. Stylus inclusus, apice bifidus, lobo superiore tereti truncato, inferiore dilatato basi superiorem amplectente. Nuculæ fuscæ, obovatæ apice rotundatæ, glabræ, sub lente punctato-tuberculatæ."

Mar. occid.—In arenosis haud procul Mogador et juxta Aïn el Hadjar copiose crescentem floriferam et fructiferam post imbres mensis Maji legimus die 3 Junii!

Mar. merid.—In collinis prov. Haha ad 750 m. primus legit Balansa. In eadem provincia legimus circ. 200 m.! et in saxosis prope Seksaoua! Prov. Shedma (*Maw spec.*)!

A proxima *S. lanata* satis superque distincta foliis minoribus, floralibus distincte petiolatis, calycis dentibus subæquilongis demum erectis, nec inæqualibus reflexis, colore corollæ, stylo profundius bilobo, nuculis fusco-rufis nec nigrescentibus. A cæteris sectionis *Hesiodia*, Benth., plurimis notis longius distat.

MARRUBIUM (*L. Gen.* 721).

M. ALYSSON (*L., Benth. in DC. Pr.* xii. 448).

Mar. merid.—Mesfioua! Seksaoua (*J. D. H.*)!

Ar. Geog. Per regionem Mediterraneam calidiorem dispersa. Deest in Græcia, in Italia media et superiore, in Gallia australia, in Lusitania et in Macaronesia.

M. VULGARE (*L., Benth. in DC. Pr.* xii. 453).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Prov. Shedma! In ruderatis urbis Marocco!

—— ——, var. LANATUM (*Benth. l. c.*),=M. Apulum (*Ten. Fl. Nap.* tab. 154).

Mar. occid.—Casa Blanca!

Mar. merid.—Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Species cosmopolita per regiones temperatas et subtropicas orbis veteris necnon utriusque Americæ late diffusa. Non deest in Macaronesia.

M. ECHINATUM (*Ball in Journ. Bot.* 1875, 175).

Planta biennis (?) elata, 3–4-pedalis; caules erecti, ramosi, hirti, quadranguli, sulcati; folia petiolata, orbiculari-ovata, inæqualiter exciso-dentata, inferiora basi cordata, floralia basi cuneata, suprema subsessilia; verticillastri remoti-20–30 flori, foliis breviores; calyx infundibuliformis, profunde 10-sulcatus, dentibus 5 (rarius sex) instructus; dentes calycini 3 superiores breves recti, apice mucronati, inferiores 2 (rarius 3) tubo calycis longiores, recti, apice hamati; bracteæ calyce breviores longe villosæ; corollæ labio superiore erecto bilobo, inferiore trilobo, lobo medio latiore rotundato emarginato; labio utroque extus et intus velutino; stamina brevia; stylus brevissimus bifidus; nuculæ (immaturæ) ovoideæ læves.

Mar. merid.—Legimus in sepibus prope Amsmiz! et specimen mancum attulerunt cll. Rein et Fritsch prope Sektana lectum!

Corollæ tubus intus nudus. Folia pro genere tenuia, superne viridia, subtus pallida nervosa non rugosa, utrinque breviter pubescentia. Species anomala, a charactere generico recedens, sed nullo pacto divellenda.

BETONICA (*L. Gen.* 718).

Genus naturale, charactere tecnico ægre definiendum, axe primario non evoluto, ramis floriferis axillaribus insigne.

B. OFFICINALIS (*L., Benth. in DC. Pr.* xii. 460), var. ALGERIENSIS, =B. algeriensis (*De Noé in Bull. Soc. Bot. Fr.* ii. 582).

Mar. sept.—Tanger (*Webb spec.*)!

Ar. Geog. Species per Europam omnem a Suecia usque regionem Mediterraneam diffusa, rarior tamen in calidioribus. In Asia media et in prov. Caucasicis non deest. Var. *algeriensis* in Africa boreali et in Hispania Bætica. Legi prope San Roque!

B. algeriensis est forma australis sp. Linnæani, floribus minoribus et calycibus paullo majoribus diversa, sed nulla nota stabili definita.

STACHYS (*L. Gen.* 719).

S. GERMANICA (*L., Benth. in DC. Pr.* xii. 464).

Mar. sept.—Tanger (*Salzmann, sec. Benth. l. c.*). In monte Beni Hosmar pr. Tetuan (*Webb Herb.*)!

Specimina Schousbœana ex "Imperio Maroccano" a Benth. l. c. citata.

—— ——, var. CRETICA,=S. cretica (*L., Willk. et Lge. Fl. Hisp.* ii. 440),=S. cinerea (*Salzm. Exsicc.*),=S. heraclea ((*Webb Herb., non All.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Differt a typo indumento molliter tomentoso nec lanato, calycibus villosis nec lanatis. Planta ulterius observanda inter *S. germanicam* et *S. heracleam*, All., pluribus notis media, haud sine dubio pro varietate enumerata.

Ar. Geog. Species per Europam mediam et regionem Mediterraneam fere omnem (exclusa Macaronesia) dispersa.

S. DURANDIANA (*Coss. in Bull. Soc. Bot. Fr.* xx. 256).

Descriptionem Cossonianam citare juvat.

"Perennis? tota *pilis patulis* aliis brevioribus glandulosis aliis elongatis *dense hirsuta* obscure virens. *Caulis erectus*, tetragonus angulis præminentibus obtusis, *superne ramosus*. *Folia* caulina *petiolata*, 3–4½ centim. longa, *ovata vel ovato-triangularia*, *basi subcordata*, dentata dentibus obtusiusculis vel acutiusculis, facie utraque hirsuta; *floralia* sessilia vel subsessilia, ovato-acuminata apice brevissime et molliter subspinescentia, dentata vel suprema ovato-oblonga integra, *calycibus longiora*. *Verticillastri* numerosi, *subsexflori*, *inferiores tantum remotiusculi*, *cæteri in spicam* foliatam *approximati*. *Bracteolæ* omnino *obsoletæ*. *Calyx* dense et patule hispidus, campanulato-tubulosus demum campanulatus, tenuiter 10-nervius, *ore æquali*, *dentibus æqualibus* triangularibus lanceolatisve, apice *breviter spinulosis*, tubi longitudine dimidia sæpius paulo brevioribus. *Corolla* 12–15 millim. longa, purpurea (sec. Durand), extus breviter hirta, *tubo* cylindrico *subincurvo* ad faucem haud ampliato calyce breviore ad tertiam partem inferiorem *intus oblique annulato-piloso, labio superiore* subhorizontali subfornicato *integro vel subretuso, labio inferiore multo longiore* patente trilobo lobo medio maximo retuso. Stamina inferiora longiora demum ad latera faucis dejecta, antherarum lobis demum divaricatis. Nuculæ nigrescentes, obovatæ, apice rotundatæ, glabræ, læves.—Descriptio juxta specimina tria herbarii Durand nunc Bouchet."

Mar. centr.—Juxta Mequinez ab abbate Philippo Durand inventa.

" *S. Durandiana* caule, foliis, calycibusque hirsutis, verticillastris plerisque 6-floris, bracteis obsoletis, calyce haud bilabiato dentibus apice spinescentibus, corollæ purpureæ tubo incluso et intus piloso-annulato pertinet ad sectionem *Stachyotypus* (Dumort.; Benth. in DC. Prod. xii. 468). In speciminibus incompletis suppetentibus radix deficit. Si planta radice perenni gaudet, villositate, caulibus robustis superne ramosis, foliis caulinis ovato-triangularibus vel ovato-oblongis, corolla majuscula, ad gregem *Elatæ* (Benth. loc. cit. 468) referenda et juxta *S. sylvaticam*, L., collocanda. Si contra radicem annuam præbet referenda ad gregem *Agrestes* (Benth. loc. cit. 477) et juxta *S. marrubiifoliam*, Viv., collocanda, a qua ut a *S. sylvatica* notis supra indicatis eximie differt."

STACHYS CIRCINATA (*L'Hér. Stirp.* i. 51, tab. 26; *Benth. in DC. Pr.* xii. 474),=S. latifolia (*Ait. Hort. Kew.* ii. 303),=S. velutina (*Willd. Enum. Suppl.* 41).

Mar. sept.—In monte Beni Hosmar pr. Tetuan (*Webb spec.*)!

Ar. Geog. Africa borealis. Hispania Bætica.

S. SAXICOLA (*Coss. in Bull. Soc. Bot. Fr.* xx. 257).

Descriptio Cossoniana ad calcem spec. a Balansa anno 1867 lectorum.

" *Perennis*, tota *densissime et mollissime niveo-lanata*. Caudex lignosus, tortuosus, caules plures emittens. *Caules diffuso-procumbentes, obtuse tetragoni, lana copiosa obtecti*, simplices vel superne ramosi. *Folia* caulina *longe petiolata, ovato-suborbiculata basi* late *cordata*, crenata, crassiuscula, *utrinque niveo-tomentosa*; *floralia subconformia*, multo minora, sensim decrescentia, *suprema calycibus breviora*. *Verticillastri* plures, subsexflori, *in spicam brevem densam approximati*. *Bracteolæ* omnino *obsoletæ*. *Calyx dense niveo-lanatus*, campanulatus, tenuiter 10-nervius, ore æquali, *dentibus æqualibus, ovatis apice abrupte in cuspidem brevem* spinescentem *acuminatis*, tubi longitudine dimidia brevioribus. *Corolla* (e fragmentis tantum nota) extus sparse et breviter hirta, *tubo* cylindrico, subrecto, ad faucem vix ampliato, calycem subæquante, ad mediam longitudinem intus *transversim annulato-piloso*, labio superiore subhorizontali subfornicato integro, labio inferiore multo longiore patente trilobo lobo medio maximo retuso. Stamina inferiora longiora, demum ad latera faucis dejecta, antherarum lobis demum divaricatis. Nuculæ nigrescentes, obovato-trigonæ, apice rotundatæ, glabræ, irregulariter reticulato-rugosæ."

Mar. merid.—In fissuris rupium prope Moulaï Ibrahim primus detexit

Balansa. Spec. his conformia foliis utrinque albo-lanatis legimus prope Gurguri!

—— ——, var. VILLOSISSIMA, *nob.* Caulibus petiolisque longe villoso-lanatis, foliis subtus villoso-lanatis, in pagina superiore pilosis virescentibus.

Mar. merid.—Legimus copiose crescentem in rupibus Aïn Tarsil!

Caudex crassus diametro pollicaris et ultra, ramos fragiles steriles diffusos floriferos adscendentes emittens. Corolla in spec. nostris pallide carnea gaudet tubo calycem paululum excedente labio superiore extus piloso, inferiore longiore trilobo, lobo medio emarginato, lateralibus parvis integris multo majore.

S. circinatæ affinis, sed facile dignoscenda foliis etiam floralibus petiolatis, verticillastris floralibus approximatis subspicatis, corolla minore, labii inferioris segmentis lateralibus parvis integris nec magnis subbilobis. Valde proxima est etiam *S. candida* (Bory et Chaub. Exped. Mor. 167, tab. 19; Benth. in DC. Pr. xii. 475). Hæc species, mihi non satis nota, differt sec. cel. Cosson calycis dentibus lanceolatis in cuspidem attenuatis, nec ut in nostra ovatis apice abrupte in cuspidem brevem subspinescentem acuminatis. Video calycis dentes in sp. nostra et in affinibus valde variabiles, et notæ ex his desumptæ interdum fallaces sunt. Corolla tamen in *S. saxicola* longius exserta et, nisi fallor, forma labii inferioris diversa.

STACHYS MAWEANA, *nob.* Affinis *S. saxicolæ*, Coss., cui caudice perenni, indumento albo-lanato, caulibus adscendentibus, subsimilis; insigniter differt tamen foliis omnibus multo minoribus ovatis acutiusculis, basi late cuneatis, in petiolum limbo æquilongum attenuatis crenato-dentatis, calycis minoris dentibus inæqualibus vix aut ne vix apice spinoso-mucronatis, corolla duplo majore, tubo parum exserto, labii inferioris lobo medio maximo subintegerrimo.

Mar. merid.—Frustula plantæ spontaneæ a cl. Maw inter Sektana et Frouga lecta nimis incompleta! ex radice ibidem lecta specimina florifera benev. communicavit cl. Maw!

Corolla, nisi fallor, pallide purpurea, pro grege magna.

S. ARVENSIS (*L., Benth. in DC. Pr.* xii. 477).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. merid.—Mesfioua! Amsmiz (*J. D. H.*)! Sec. notulam MS. vidimus in convalle Amsmiz usque 2000 m.!

Ar. Geog. In temperatis totius orbis veteris late diffusa. In America tam tropicali quam extratropicali et in insula Sanctæ Helenæ verisimiliter cum seminibus introducta.

S. HIRTA (*L., Benth. in DC. Pr.* xii. 481).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Tetuan (1851 et 1871)!

Mar. occid.—In prov. Haha haud procul Mogador!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

STACHYS ARENARIA (*Vahl, Symb.* ii. 64; *Desf. Fl. Atl.* ii. 21, tab. 126; *De Noé in Webb, Phyt. Canar.* iii. 98; *Benth. in DC. Pr.* xii. 485, ex parte).

Mar. sept.—Tetuan ad ostium fluminis (1851)! In montosis prope Tetuan (*Webb spec.*)!

Mar. occid.—Frequens in regione litorali, imprimis in arenosis, sed non deest in saxosis submontanis. Casa Blanca! Mazagan! Saffi! Mogador! In monte Djebel Hadid! et juxta Aïn el Hadjar!

Mar. merid.—Occurrit, sed rarius, in terris interioribus. Sektana! Seksaoua!

Ar. Geog. Africa borealis. Sicilia. Italia meridionalis. Ins. Canariensium dubia civis. Deest in peninsula Iberica.

Cel. Bentham loc. cit. *S. ibericam*, M. B., et *S. scordifoliam*, Willd., cum *S. arenaria* conjunxit, dum cl. De Noé has omnes pro speciebus probe distinctis l. c. vindicavit. *S. scordifolia* est planta hortensis mihi non satis nota. *S. Iberica*, planta orientalis, est sane *S. arenariæ* valde proxima, differt tamen florum verticillis in spicam approximatis, dentibus calycinis inæqualibus, corollæ tubo annulo piloso destituto, labio superiore bifido, et, monente De Noé, cotyledonibus rotundatis nec ellipticis. In multis specim. *S. arenariæ* a me exploratis vidi semper dentes calycinos subæquales, corollæ tubum annulo piloso fere completo instructum, et labium superius integrum.

S. arenaria variat herba plus minusve pilosa, habet folia caulina late lineari-oblonga pauciserrata plerumque obtusa, floralia integerrima apice cuspidato-mucronata. Nuculæ badiæ lævissimæ. Calyx intus glaberrimus nervis coloratis 18–22 (nec exacte 20) notatus.

S. MOLLIS (*Willd. Herb.* no. 10877, *ex Benth. in DC. Pr.* xii. 475).

Mar. sept.—Prope Tetuan mense Junio 1851 legi florentem! eandem plantam nondum florentem legimus in monte Beni Hosmar mense Aprili 1871!

Ar. Geog. Species Maroccana.

Descriptioni Benthamianæ l. c. adamussim convenit, nisi verticillastris supremis interdum (nec semper) approximatis. Procul dubio in grege *S. maritimæ* et *S. arenariæ* collocanda, huic proxima sed multis notis gravioribus diversa. Calyx multo brevior campanulatus dentibus brevibus apice mucronatis inæqualibus præditus; corollæ annulo piloso interno incompleto—scil. nonnisi inter insertionem staminum duorum inferiorum—labiis subæquilongis, superiore utrinque et præsertim extus villoso profunde bifido. Nuculæ oculo fortiter armato minute granulatæ. In *S. molli* herba tota albo-lanata; folia brevia crassa subrugosa, floralia integra apice calloso nec ut in *S. arenaria* mucronato-spinoso instructa. Willdenovius habuit hanc speciem inter plantas Maroccanas a Broussonnet lectas et (ut videtur) signo interrogationis "Mogador" pro loco natali adjecit.

Lamium (*L. Gen.* 716).

L. amplexicaule (*L., Benth. in DC. Pr.* xii. 508).

Mar. sept.—In monte Beni Hosmar prope Tetuan (*J. D. H.*)!

Mar. merid.—In Atlante Majore a 1500 m. usque 2900 m. In convalle Aït Mesan! et in ascensu ad jugum Tagherot! In monte Djebel Tezah!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa fere omnis (exclusa arctica). Montes Himalaya. In America boreali forsan advena, hodie spontaneum.

Inter spec. nostra Atlantica adest lusus herba tota (etiam in calycibus) glaberrima, calycis dentibus rigidioribus coloratis.

L. album (*L., Benth. in DC. Pr.* xii. 510), var. **parviflora**?

Mar. merid.—In convalle Aït Mesan circ. 1400 m.! Prope Amsmiz ad 1000 m. s. m.!

Planta mihi subdubia, a *L. albo* nisi corollis minoribus vix differt, sed facie aliquid diversa.

Ar. Geog. L. album, in temperatis frigidioribus Europæ et Asiæ mediæ frequens, rarius occurrit in montibus regionis Mediterraneæ. Deest in Hispania australi et in insulis Italicis; in Africa boreali a Fontanesio indicatum, sed a nemini recentiorum detectum.

L. flexuosum (*Ten. Fl. Nap.* ii. 19, tab. 52; *Benth. in DC. Pr.* xii. 511).

Mar. sept.—In monte Beni Hosmar prope Tetuan (*Webb Herb.*)! In eodem monte spec. mox floribundum legit J. D. H.!

Ar. Geog. Regio Mediterranea occidentalis a Sicilia usque fretum Herculis.

Ballota (*L. Gen.* 720).

B. hirsuta (*Benth. Lab.* 595, *et in DC. Pr.* xii. 518), = B. orbicularis (*Lag. Hort. R. Matrit.*), = B. africana (*Colm. Ap. Fl. D. Cast.* 121, *non Benth.*), = Beringeria hispanica (*Neck. Elém.* 312), = Marrubium hispanicum (*Cavan. et Desf., non L. Sp. Pl.* 816), = Marrubium crispum (*Desv. in Lam. Dict.* iii. 719, *non L.*).

Mar. occid.—Prope Mogador (*Broussonnet ex Benth. l. c.*). Prope Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Satis frequens in dumetis et sepibus regionis inferioris. Prov. Haha! Prov. Shedma pluribus locis! Mesfioua! Mzouda! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Planta satis variabilis—folia sæpius late ovata utrinque rugosa superne subcinerea, interdum latiora suborbicularia sat profunde cordata superne viridia; in spec. nostris folia omnia in pagina inferiore sordide albo-lanata eximie rugosa, floralia verticillos longitudine æquantia vel superantia.

Ar. Geog. Africa boreali-occidentalis. Hispania centralis et australis.

Calyx in spec. nostris descript. Benthamianæ non omnino conformis; limbus late expansus in lobos quinque ovatos acutos divisus, lobo singulo mucronato-denticulato, sæpius (sed non semper) dente majusculo inter lobos adjecto.

Specimen nostrum prope Mzouda lectum ad var. *hispidam* (Benth. l. c.) accedit, sed notæ differentiales indicatæ nimis variabiles.

BALLOTA NIGRA (*L., Benth. in DC. Pr.* xii. 520), lusus singularis vel forsan nova species?, = B. bracteosa, *nob. in Herb.*

Planta perennis? 2–3-pedalis, ramosa, ramis adscendentibus; folia late ovata, basi sæpius cordata, acuta, superiora longiuscule acuminata, grosse crenato-serrata, utrinque tomentoso-puberula, subtus cinerea; cymulæ laxiusculæ; flores bracteis obverse lanceolatis angustis integris, vel sæpius expansis foliaceis dentatis suffulti; calycis quinquedentati limbo e basi infundibuliformi late expanso, in dentes integros acutos non mucronatos diviso; corolla parva calycem parum superans; nuculæ aterrimæ lucentes, nec ut in *B. nigra* atro-virides opacæ.

Mar. occid.—Legi floriferam et fructiferam die 5 Junii juxta urbem Mogador! Ex spec. immaturo in Herb. Kew. hæc est *B. nigra*? (*Lowe Cat.*).

Characteres enumerati ad speciem novam definiendam idonei, hanc tamen esse lusum singularem *B. nigræ*, sp. valde ludibundæ, valde suspicor.

Ar. Geog. *B. nigra* per Europam mediam et regionem fere omnem Mediterraneam (exclusa Macaronesia) diffusa est.

PHLOMIS (*L. Gen.* 723).

P. CRINITA (*Cavan. Icon.* iii. 25, tab. 247; *Benth. in DC. Pr.* xii. 538), = P. biloba (*Desf. Fl. Atl.* ii. 25, tab. 127), = P. mauritanica (*Munby, Fl. Alg.* 60, tab. 3); sphalmate a Benth. l. c. citatur Mœnch, Pl. Alg.

Mar. sept.—Prope Tetuan (1851)! In monte Djebel Dersa prope Tetuan (*Webb Herb.*)!

Mar. merid.—In aridis pr. Aïn Oumast! Inter Tasseremout et Ourika (*G. Maw spec.*)! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Nomen Fontanesianum erroneum (ob corollæ labium superius in spec. suo casu aliquo fissum) et prætermittendum.

Ar. Geog. Africa boreali-occidentalis. Hispania.

P. HERBA VENTI (*L., Benth. in DC. Pr.* xii. 542; *Bot. Mag.* li. tab. 2449).

Mar. sept.—Tanger (*Webb spec.*)!

Mar. merid.—Inter Ourika et Reraya! Reraya! Sektana!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

PRASIUM (*L. Gen.* 737).

P. MAJUS (*L., Benth. in DC. Pr* xii. 556).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir! Inter Tanger et Tetuan! Tetuan (1851)!

Mar. occid.—Casa Blanca (*J. D. H.*)! Mogador (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Vidimus ad radices Atlantis, sed specimina desunt! (spec. prope Aouina, prov. Shedma lecta benev. comm. Cosson)!

Ar. Geog. Regio fere omnis Mediterranea calidior. Deest in Gallia in Italia superiore et in insulis Canariensibus.

TEUCRIUM (*L. Gen.* 706).

T. FRUTICANS (*L., Benth. in DC. Pr.* xii. 575).

Mar. sept.—Tanger (*Salzmann, sec. Benth. l. c.*). In monte Beni Hosmar prope Tetuan!

Mar. occid.—In prov. Haha prope Mogador!

Mar. merid.—Haud infrequens ad radices Atlantis Majoris. Tasseremout! Ourika (*J. D. H.*)! Reraya! Sektana (*J. D. H.*)! Keira (*Balansa spec.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia). In Gallia rarissimum.

T. BRACTEATUM (*Desf. Fl. Atl.* ii. 7, tab. 120, *minus bona*; *Benth. in DC. Pr.* xii. 582).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Secus viam ad Bubana (*spec. ex Herb. Schousb. comm. Cosson*)!

Ar. Geog. Africa boreali-occidentalis. Fertur in Hispania pr. Tarifa, sed a nemini recentiorum inventum.

T. COLLINUM (*Coss. in Bull. Soc. Bot. Fr.* xx. 258).

Sequitur descriptio Cossoniana:—

"Planta *perennis, inferne frutescens*, a basi ramosa, caudice lignoso in radicem fusiformem abeunte, a basi ramosa, tota velutino-villosa. Caules diffuso-adscendentes, vix tetragoni, subsimplices, sæpius ramulos nonnullos axillares abbreviatos emittentes, pilis patentibus mollibus longe villosi. *Folia* subapproximata, *ovata basi cuneata* in petiolum attenuata, crenata, nervis supra impressis infra præminentibus subbullata, supra villosa, subtus canescenti-subtomentosa, *floralia subconformia in verticillos* 4–6-*folios disposita* superiora oblonga calyces subæquantia. *Verticillastri* plures, distincti, *subbapproximati*, 4–6-flori, *superiores in spicam simplicem* teretem *foliatam conferti. Calyx breviter pedicellatus, late campanulatus tubo inferne valde gibbo*, ore barbato, bilabiatus, *dentibus labii superioris multo latioribus supremo transversim latiore* subtruncato *abrupte breviterque cuspidato*, lateralibus ovatis apice rotundatis, labii inferioris dentibus lanceolatis in subulam brevem sensim attenuatis. *Corolla* purpurascens?, extus villosa, *torsione tubi resupinata, labii superioris lobis cum labio inferiore in labium unicum* 5-lobum *utrinque lobis* 2 *ovato-rotundatis* et lobo terminali suborbiculato multo majore concavo *donatum confluentibus.* Genitalia arcuata, longe exserta. *Nuculæ* fuscæ, glabræ, *grosse reticulato-rugosæ.*"

Mar. occid.—Legimus in monte Djebel Hadid ubi hanc stirpem primus detexit Balansa! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Frequens in dumetis regionis inferioris. Legimus ac vidimus pluribus locis in provinciis Haha! et Shedma! et ad radices Atlantis Majoris. Amsmiz! Seksaoua! Mtouga (*J. D. H.*)! Prope Keira legit Balansa sec. Cosson l. c.

Monente cel. auctore, " *T. collinum* habitu, foliis floralibus verticillatis, calycis fabrica juxta *T. bracteatum*, Desf., ad sectionem *Stachyobotrys* a cl. Bentham (in DC. Prodr. xii. 581) refertum, collocandum."

A *T. bracteato* satis superque differt foliis inferioribus basi semper cuneatis in petiolum sensim attenuatis, nec subcordatis, crenis foliorum inæqualibus acutioribus, floralibus brevissime nec longiuscule petiolatis fere omnibus serratis, nec integerrimis, calyce breviter nec longiuscule pedicellato, dente supremo latiore subtruncato breviter cuspidato nec longiuscule acuminato-cuspidato.

Planta satis variabilis, interdum erecta 2-pedalis et ultra, interdum humilis diffusa.

TEUCRIUM SCORODONIA (*L., Benth. in DC. Pr.* xii. 584).

Mar. sept.—In monte Djebel Kebir!

(In Imp. Maroccano legit Broussonnet sec. Desfontaines, Fl. Atl. 5.).

Ar. Geog. Europa fere omnis, imprimis occidentalis. Marocco. Madera.

Specimina nostra ab Europæis nullo modo diversa.

T. PSEUDO-SCORODONIA (*Desf. Fl. Atl.* ii. 5, tab. 119; *Benth. in DC. Pr.* xii. 584).

Mar. sept.—Tanger (*Salzm. Exsicc., spec. in Herb. Gay*)!

—— ——, var. BÆTICUM,=T. bæticum (*Boiss. et Reut. Pug.* 98).

Mar. sept.—Tanger (*Salzm. Exsicc.*), sec. Boiss. et Reuter l. c. In monte Djebel Kebir!

Legi etiam in collibus juxta S. Roque.

Hæc est nil nisi var. levis *T. Pseudo-scorodoniæ*, foliis paullo minoribus et racemo tenuiter glanduloso-puberulo.

Ar. Geog. Species in Africa boreali-occidentali, in Italia meridionali et in Sicilia. Varietas in Hispania Bætica et in ditione Tingitana.

T. Pseudo-scorodonia, valde proximum, et *T. Scorodoniæ* notis non gravibus dignoscendum, forsan melius pro subspecie habendum.

T. RESUPINATUM (*Desf. Fl. Atl.* ii. 4, tab. 117; *Benth. in DC. Pr.* xii. 576).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb spec.*)! legi in herbosis uliginosis juxta pontem Romanum! et in clivo montis Djebel Kebir!

Ar. Geog. Africa boreali-occidentalis. Hispania.

T. decipiens (*Coss. in Bull. Soc. Bot. Fr.* xx. 258).

Sequitur descriptio Cossoniana:—" Planta *annua*, sæpius pusilla, villosa. Caulis erectus, tetragonus, a basi divaricato-ramosus, pilis patentibus villosus. *Folia* præsertim superiora approximata, *oblonga in petiolum attenuata*, facie utraque viridia, præsertim infra villosa nervis vix prominulis, *inferiora* superne *grosse paucidentata, floralia superiora subconformia* angustiora, integra flores excedentia. *Verticillastri* plurimi distincti, *biflori*, secundi, superiores in spicam foliatam foliis floralibus superioribus comosam approximati. *Calyx* pedicellatus, in pedicello nutanti-subdeflexus, *campanulato-tubulosus* tubo inferne gibbo, ore barbato, obsolete bilabiatus, *dentibus subconformibus lanceolatis brevissime aristatis, supremo patenti-ascendente,* cæteris erectis. *Corolla* purpurascens, extus villosa, tubo haud torto *non resupinata* nempe labio inferiore deorsum spectante, labii superioris lobis cum labio inferiore in labium unicum 5-lobum utrinque lobis duobus et lobo terminali donatum confluentibus, lobis lateralibus superioribus triangulari-lanceolatis, inferioribus oblongis, terminali obovato-cuneato multo majore. Genitalia arcuata, longe exserta. Nuculæ fusco-nigrescentes, glabræ, reticulatæ."

Mar. occid.—In monte Djebel Hadid haud procul Mogador, ex spec. in herb nostro, primus detexit Balansa!

Mar. merid.—In regione inferiore hinc inde rarius occurrit. In provincia Shedma bis lectum! Inter Ourika et Reraya (*Maw legit*)! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

A *T. resupinato* cui proximum distinguitur statura pumila 2–6-pollicari, verticillastris magis approximatis, corolla non resupinata. Ut mihi videtur, pro subspecie enumerandum. Dentes calycini in spec. ex Djebel Hadid quam in *T. resupinato* breviores, in spec. a Sektana æquilongi. Herba sæpius pube brevi tenui adspersa, interdum villosa.

T. mauritanicum (De Noé in Bull. Soc. Bot. Fr. ii. 585), mihi ex descriptione tantum nota, videtur *T. decipienti* valde proximum, nisi hoc foret idem ac *T. resupinatum* (Balansa, Pl. d'Algérie, No. 438, non Desf.), = *T. Balansæ* (nobis MSS. in herb. olim), a *T. resupinato,* ut mihi videtur, et certe a *T. decipiente,* diversum.

TEUCRIUM RUPESTRE (*Coss. in Bull. Soc. Bot. Fr.* xx. 259).

Descriptionem Cossonianam attuli:—"*Suffrutex* caudice lignoso incrassato, multicaulis. Caules diffusi, subtetragoni, inferne et sæpius superne ramosi, præsertim in parte superiore pilis patentibus mollibus pubescentes vel demum glabrescentes. *Folia* caulina subdistantia, *ovata vel ovato-subtriangularia* obtusa *basi truncata vel subcordata* breviter petiolata, crenata, nervis supra impressis infra præminentibus bullata, supra glabrescentia, infra villoso-subtomentella, *floralia* infima subconformia, cætera *oblonga integra* calyces subæquantia. *Verticillastri* plures, *2-flori, in spicas* apice caulis et ramorum *conferti. Calyx pedicellatus,* in pedicello nutans, campanulatus tubo inferne subgibbo, ore non barbato, bilabiatus, *dentibus labii superiori latioribus ovatis* supremo breviter acuminato, lateralibus brevioribus obtusis, *labii inferioris lanceolatis* apice *vix mucronatis. Corolla* lutescens, extus pubescens, tubo haud torto non resupinata, *labii superioris lobis cum labio inferiore in labium* unicum *5-lobum* nempe utrinque lobis duobus superioribus lanceolatis elongatis, inferioribus oblongis et lobo terminali majore suborbiculato basi contracto concavo donatum *confluentibus.* Genitalia arcuata, longe exserta. Nuculæ (immaturæ tantum notæ) glabræ, rugosæ."

Mar. merid.—Prope Keira detexit Balansa anno 1867. Legimus in rupibus supra Seksaoua copiose crescens! In rupibus Aïn Tarsil!

Hæc stirps, ut jam monuit cel. Cosson, quoad affinitatem dubia, pluribus notis sectioni *Stachyobotrys* (Benth. in DC. Prod.) accedit, sed habitu et corollæ structura potius in § *Chamædrys* (Benth. l. c.) et juxta *T. fragile*, Boiss., collocanda mihi videtur.

TEUCRIUM GRANATENSE (*Boiss. et Reut. Pug.* 99),=T. pyrenaicum, var. granatense (*Boiss. Elench.* 78; *Benth. in DC. Pr.* xii. 591), var. ATLANTICUM, *nobis*.

Differt herba tota sordide albo-villosa; dentibus calycinis acutis, nec ut in typo Boissieriano acuminatis, cum foliis floralibus coloratis, corolla albida tubo quam in typo breviore.

Mar. merid.—In convalle Amsmiz circ. 1400 m.!

T. granatense, Boiss., hucusque tantum in Hispania australi detectum, locum medium tenet inter species facie prorsus diversas—*T. pyrenaicum*, L., et *T. cinereum*, Boiss.; et varietas nostra huic et *T. granatensi* intermedia est. An igitur tres species enumerandæ, aut potius *T. cinereum* et *T. granatense* ad subspecies reducenda?

T. POLIUM (*L., Benth. in DC. Pr.* xii. 592)), var. VULGARE (*Benth. l. c.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Mogador (*Lowe Cat.*)? In prov. Haha prope Mogador!

—— ——, var. GNAPHALODES (*Benth. l. c.*),=T. gnaphalodes (*Vahl, Symb.* i. 41).

Mar. occid.—Prope Mogador (*J. D. H.*)!

Mar. merid.—Sheshaoua! Misra ben Kara!

—— ——, var. ANGUSTIFOLIUM (*Benth. l. c.*),=T. capitatum (*L. Sp. Pl.* 792; *Cavan. Icon.* ii. 17, tab. 119).

Floribus sæpius roseo-purpurascentibus in capitulis parvis tomentosis congestis, foliis oblongis vel oblongo-linearibus.

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Forma in planitie et in regione inferiore Atlantis Majoris vulgatissima. Prov. Shedma! Tasseremout! Ourika! Reraya! In convalle Aït Mesan usque 1500 m.! Amsmiz! et alibi visum.

Huc, nisi fallor, referenda est var. *purpurascens* (Benth. l. c.).

—— ——, var. ATLANTICUM, *nob*.

Forma insignis forsan melius cognita pro specie diversa vindicanda, ramis prostratis floriferis indivisis, foliis profunde inciso-crenatis vel pinnatifidis, lobis oblongis apice rotundatis, breviter pilosis, obscure virentibus, floribus in spicam brevissimam confertis, corollis paullo majoribus purpurascentibus.

Mar. merid.—In convalle Aït Mesan circ. 1400 m.!

Ar. Geog. T. Polium per regionem omnem Mediterraneam (exclusa Macaronesia) late diffusum est.

Varietates enumeratæ (excepta forsan *atlantica*) nullis notis stabilibus definiendæ, etsi sæpe facie valde diversæ.

TEUCRIUM BULLATUM (*Coss. in Bull. Soc. Bot. Fr.* xx. 260).

Sequitur descriptio Cossoniana :—" *Suffrutex* caudice lignoso incrassato multicaulis. Caules diffusi vel ascendentes, vix tetragoni, inferne et sæpe superne ramosi pilis patentibus dense cinereo-villosi. *Folia sessilia,* caulina approximata, *oblongo-lanceolata* obtusa, *a basi crenata,* nervis supra impressis infra præminentibus *bullata,* marginibus revoluta, utrinque cinereo-villosa, floralia lineari-lanceolata integra calycibus paulo longiora spicas apice comantia. *Verticillastri in spicas oblongas* teretes apice caulis et ramorum *dense congesti. Calyx subsessilis,* erectus, *tubuloso-campanulatus,* ore non barbato, vix bilabiatus, *dentibus subæquilongis apice subulatis, labii superioris vix latioribus ovato-lanceolatis,* labii inferioris lanceolatis. *Corolla* ochroleuca, extus pubescens, tubo haud torto non resupinata, *labii superioris lobis* amplis *oblongis* divergentibus *subhorizontalibus genitalia excedentibus, labii inferioris* trilobi *lobis lateralibus oblongo-lanceolatis* margine inflexo plica superne ad basim lobulo auctis, lobo terminali majore suborbiculato basi contracto concavo. Genitalia arcuata, lobis labii superioris breviora. Nuculæ nigræ, glabræ, rugosæ."

Mar. merid.—In monte Aït-Ougourt juxta Keïra, ad austro-occidentem urbis Maroc, ad 1300 metr, legit Balansa anno 1867. Legimus in monte supra Seksaoua!

Monente cel. auctore :—" Caulibus suffrutescentibus, verticillastris in spicas oblongas teretes dense congestis, calyce tubuloso-campanulato, dentibus calycinis subæquilongis superioribus vix latioribus, nuculis rugosis ad sectionem *Polium* (Benth. in DC. Prodr. xii. 590) juxta *T. cinereum,* Boiss., collocandum, sed abunde differt foliis sessilibus, dentibus calycinis longis, etc. Affine est *T. compacto* (Clement. in Lag. Nov. Gen. et Sp. 17; Benth. in DC. Prodr. xii. 586), a sectione *Scordium* (Benth. loc. cit. 585) removendo et quoque ad sectionem *Polium* referendo, sed eximie distinctum foliis sessilibus a basi crenatis, non petiolatis inferne cuneatis integris, dentibus calycinis longioribus, etc."

Radices lignosæ in fissuris rupium aridissmarum serpentes caules plurimos 4–8 pollicares diffusos prostratos emittunt. Tota planta (in spec. nostris) pilis patentibus rigidiusculis cinereo-hirta; calyces tamen nisi dentibus margine ciliatis glabri. Species distinctissima juxta *T. compactum* et *T. verticillatum* (Cavan. Icon. ii. 77, tab. 198; Benth. in DC. Pr. xii. 593), ut mihi videtur, collocanda.

AJUGA (*L. Gen.* 705).

A. IVA (*L.*, sub *Teucrio*; *Schreb. Unilab.* 25; *Benth. in DC. Pr.* xii. 600).

Mar. sept.—Tanger (*Webb Herb.*)! Cap. Spartel! Tetuan (1851)! Inter Tetuan et Ceuta!

Mar. occid.—Casa Blanca (*J. D. H.*)! Mogador! (*Lowe Cat.*). In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Frequens in arvis et saxosis e regione inferiore usque in subalpinas Atlantis Majoris. In prov. Haha! Shedma, in aridis pr. Aïn Oumast! Sheshaoua! Amsmiz! Seksaoua! In convalle Aït Mesan usque in ascensum jugi Tagherot 1400–2700 m. s. m.! In monte Djebel Tezah circ. 2000 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Corollæ ludunt purpureæ, luteæ et rarius albidæ. Forma corollis luteis (*A. pseudo-Iva*, DC.) cum cæteris crescens nequaquam pro varietate habenda.

PLANTAGINEÆ (*R. Br. Prod.* 423).

PLANTAGO (*L. Gen.* 142).

P. MAJOR (*L., Dcne. in DC. Pr.* xiii. pars 1, 694).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Sheshaoua!

Ar. Geog. In orbis veteris temperatis et calidioribus fere ubique diffusa. In utraque America hodie spontanea, an introducta?

Planta Mogadorensis a b. Lowe ad var. *intermediam* (Dcne. l. c.) relata; varietates tamen plurimæ descriptæ, formis intermediis inter se conjunctæ, vix certe dignoscendæ; alteræ potius lusus quam veræ varietates.

P. ALBICANS (*L., Dcne. in DC. Pr.* xiii. pars 1, 705; *Schousb. Gew. Marok.* 49).

Mar. occid.—Casa Blanca! Mogador in insula!

Mar. merid.—Prov. Haha (ubi frequens)! (*Schsb. l. c.*). Prov. Shedma, pluries visa et lecta!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

Folia et radices fere certissime ejusdem sp. prope Agadir legerunt coll. indigeni, 1871. Hæc et spec. nonnulla ex prov. Haha ad var. *latifoliam* (Willk. et Lge. Fl. Hisp. ii. 354) referenda videntur. Folia, in spec. nostris latitudine valde variabilia, video semper mucrone nudo cartilagineo apiculata.

—— ——, var. (vel forsan subspecies) HUMILIS, *nob.*

Folia breviora, pilosa, vix villosa, in pagina superiore cinereo-virentia nervosa; scapi breves 2-4-pollicares; spica brevior, oblongo-ovata, floribus 1–2 ad basin remotioribus. Facie potius *P. decumbenti* similis, sed calyx et fructus *P. albicantis.*

Mar. merid.—Legimus in convalle Amsmiz circ. 1500 m.!

P. DECUMBENS (*Forsk. Fl. Æg.-Arab.* 30).

Mar. merid.—In prov. Shedma in via qua itur versus Mogador (*G. Maw spec. in Herb. Kew.*)! Prope Misra ben Kara (spec. unicum defloratum)!

P. decumbens inter plantas Mogadorenses in Lowe Cat. enumeratur. Specimen tamen a beato Lowe ex Mogador in herb. Hooker conservatum, flore et fructu destitutum, mihi videtur nimis incertum, et forsan ad formam depauperatam *P. albicantis* referendum.

Ar. Geog. P. decumbens ex India boreali-occidentali per regiones aridas calidiores Asiæ, Mediterraneæ et Africæ borealis, usque in Imperium Maroccanum meridionale et in insulas Canarienses diffusa est. Species proxima et nimis affinis (*P. ovata*) in Hispania australi obvia est.

P. ovata (Forsk. Fl. Æg.-Arab. 31; Dcne. in DC. Pr. xiii. pars 1, 706), nullis notis stabilibus a *P. decumbente* dignoscenda, mihi videtur tantum hujus varietas. Specimina Canariensia *P. decumbentis,* quibus nostra omnino conformia, intermedia sunt.

PLANTAGO LAGOPUS (*L., Dcne. in DC. Pr.* xiii. pars 1, 716).

Mar. sept.—Tanger! Inter Tanger et Tetuan!

Mar. occid.—Mazagan! Mogador (satis frequens)! (*Lowe Cat.*). In provincia Haha prope Mogador! Aïn el Hadjar haud procul Mogador!

—— ——, var. LUSITANICA, = P. lusitanica (*Desf. Fl. Atl.* i. 135; *Dcne. in DC. Pr. l. c.*: *Schousb. Gew. Marok.* 48).

Mar. sept.—Tanger (*Schsb. l. c.*).

Mar. occid.—Casa Blanca!

Mar. merid.—Mzouda!

Aspectu valde diversa, præsertim si specimina selecta in herbario vidimus. Hæc est typo multo major, capitulis crassis cylindricis, caule basin versus elongato, adeo ut foliorum rosula sæpe a collo radicis remota; sed occurrunt formæ intermediæ, ut olim monuit b. Schousboe l. c., et hæc absque dubio sicut varietas enumeranda.

Ar. Geog. P. Lagopus per regionem Mediterraneam fere omnem (inclusa Macaronesia) diffusa est, prediligit regiones sublitorales et fit rarior in Oriente. Var. *lusitanica* occurrit hinc inde in zona calidiore.

P. AMPLEXICAULIS (*Cavan. Icon.* ii. 22, tab. 125; *Dcne. in DC. Pr.* xiii. pars 1, 719; *Schousb. Gew. Marok.* 51).

Mar. merid.—Videtur satis rara in regione calidiore. Prope Seksaoua semel lecta! Schousboe non vidit sed semina habuit ex prov. meridionalibus.

Ar. Geog. Per Africam borealem, Hispaniam austro-orientalem, Græciam et Orientem dispersa, nullibi frequens. In insulis Canariensibus etiam obvia.

P. SERRARIA (*L., Dcne. in DC. Pr.* xiii. pars 1, 731; *Schousb. Gew. Marok.* 50).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! "In ditione Tingitana rara" (*Schsb. l. c.*). Vidimus ac legimus copiose crescentem haud procul Cap. Spartel! et inter Tanger et Tetuan!

Mar. occid.—Prope Casa Blanca visa!

Ar. Geog. Regio Mediterranea occidentalis a Græcia usque insulas Canarienses. Deest in Gallia, in Hispania boreali et in Italia media et septentrionali.

P. MACRORHIZA (*Poir. Voy.* ii. 154; *Dcne. in DC. Pr.* xiii. pars 1, 732; *Schousb. Gew. Marok.* 50).

Mar. sept.—Tanger (*Schsb. l. c.*). Cap. Spartel (*Schsb. l. c.*). Inter Tanger et Tetuan! Prope Tetuan!

Mar. occid.—Casa Blanca! Mazagan! Saffi! Mogador!

Mar. merid.—In prov. Shedma (*J. D. H.*)!

Ar. Geog. Per regionem Mediterraneam imprimis occidentalem dispersa.

Hispaniæ dubia civis. Deest in Macaronesia, nec vidi ex Asia Mediterranea.

Species imprimis maritima, rarius in terris a mari remotis obvia. Quoad flores et fructus *P. Coronopus* ab hac parum differt. An hujus subspecies facta perennis?

PLANTAGO CORONOPUS (*L.*, *Dcne. in DC. Pr.* xiii. pars 1, 732).

Mar. sept.—Tetuan! Nisi fallor, hanc etiam vidi prope Tanger!

Mar. occid.—Mazagan! Mogador (*Lowe Cat.*).

Mar. merid.—Mesfioua! Amsmiz! et alibi visa!

Specimina pumila tenuia forsan ad var. *simplex* (Dcne. l. c.) referenda.

—— ——, var. MAROCCANA, *nob.*

Foliis brevibus latiusculis integris vel dentatis, spica villosa, bracteis flores excedentibus a typo differt.

Mar. occid.—In insula Mogador! et in arenosis prope urbem!

Mar. merid.—Juxta Mskala!

—— ——, var. CUPANI (*Dcne. l. c.*), = P. Cupani (*Guss. Syn. Fl. Sic.* i. 199) lusus glabrescens.

Mar. merid.—Satis frequens ad radices Atlantis Majoris unde interdum in regionem subalpinam ascendit. Ourika! Aït Mesan usque in ascensum jugi Tagherot! Supra Amsmiz!

Quoad formam foliorum pinnatifidorum segmentis sæpius iterum profunde pinnatifido-dentatis falcatis, spec. nostra Siculis conformia sed folia nisi margine scabro subglaberrima.

Ar. Geog. *P. Coronopus* per regionem omnem Mediterraneam et Europam omnem (exc. arctica) late diffusa est; varietates plurimæ ægre limitandæ in reg. calidioribus hinc inde obviæ.

P. Cupani est forma minus variabilis et forsan sicut subspecies enumeranda.

P. MAURITANICA (*Boiss. et Reut. Pug.* 105; *Dcne. in DC. Pr.* xiii. pars 1, 734).

Mar. merid—In convalle Amsmiz a 1300 m. usque 1600 m.!

Ar. Geog. Africa boreali-occidentalis.

Sp. hanc cel. Decaisne foliis angustioribus a *P. Cynope* l. c. distinxit. Re vera folia variant angustiora, vel ut in sp. nostris breviora et latiora.

Præter cæteras notas *P. mauritanica* a *P. Cynope* optime dignoscitur foliolis calycinis subæqualibus, nec, ut in *P. Cynope*, insigniter inæqualibus. Forsan lapsu calami cel. Decaisne foliola calycina subæqualia *P. Cynopi* tribuit—testante ipsa natura, et consentientibus omnibus auctoribus, semper eximie inæqualia sunt.

P. PSYLLIUM (*L.*, *Dcne. in DC. Pr.* xiii. pars 1, 734; *Schousb. Gew. Marok.* 54).

Mar. sept.—Tanger (Salzm. Exsicc. in Herb. Gay sub '*P. Psyllium*, L., non Fl. Gr.')! Inter Tanger et Tetuan! Tetuan!

Mar. occid.—Mogador! (*Lowe Cat.*).

Mar. merid.—Shedma (*J. D. H.*)! Mesfioua! Milhain! Seksaoua!

Citatur inter synonyma hujus speciei *P. agrestis* (Salzm. Cat. Pl. Tingit.); opus citatum mihi incognitum est.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Etiam in Abyssinia inventa.

Plantago stricta (*Schousb. Gew. Marok.* 55; *Dcne. in DC. Pr.* xiii. pars 1, 735).

Mar. occid.—Circa Mogador (*Schsb. l. c.*). In insula Mogador! Agadir (*Coll. Indig.* 1871)!

Differt a *P. Psyllio*, cui proxime affinis, indumento ex pilis papillosis brevissimis, ad nodos longioribus, plerumque retrorsis (non refractis ut habet cel. Decaisne), nec pubescenti-viscoso, foliis lineari-subulatis integerrimis, nec sæpius denticulatis, bracteis et foliolis calycinis apice teretibus obtusis, nec acuminatis. Hæ notæ videntur satis constantes sed non gravis momenti, et potius ad subspeciem definiendam idoneæ. Cel. Decaisne, nescio quomodo hallucinatus, bracteas inferiores acuminatas subaristatas l. c. descripsit.

Planta secundum auctores Imp. Maroccani propria. Cel. Decaisne tamen inter synonyma citat *P. rugosam* (Hochst. Pl. Adoen. Exsicc. No. 60), et ego vidi specimina in Herb. Kew. nostris conformia ex Afghanistan. Forsan cum aliis stirpibus per regionem desertorum usque provincias meridionales Imp. Maroccani dispersis enumeranda.

NYCTAGINEÆ (*Juss. Ann. Mus. Par.* ii. 269).

BOERHAVIA (*L. Hort. Cliff.* 17).

B. PLUMBAGINEA (*Cavan. Icon.* ii. 7, tab. 112; *Vahl, Enum.* i. 287), = B. dichotoma (*Vahl, Enum.* i. 290; *Chois. in DC. Pr.* xiii. pars 2, 454), = B. pulverulenta (*Dupuis in Vahl, Enum.* i. 291).

Mar. merid.—? Specimen nondum florens in prov. Shedma legit J. D. H.! Foliis et habitu spec. nostris Hispanicis et Africanis simillimum sed ex florum defectu omnino incertum.

Ar. Geog. Africa tropica et subtropica. Arabia Felix. In Hispania australi rarissima.

B. MAROCCANA (*Ball in Journ. Bot.* 1875, 176).

Basi lignosa, truncus scil. diametro pollicaris et ultra caules plurimos herbaceos vel inferne lignosos emittens; rami tenues adscendentes, dichotome divisi, sub lente hirtuli; folia petiolata, lanceolato-ovata, acuta, inferiora latiora obtusa, basi cuneata (nunquam subcordata), margine integra subundulata, insigniter bicoloria, in pagina superiore viridia nitida, inferne glauca; inflorescentia paniculato-cymosa, cymis contractis (pseudumbellis) ex floribus numerosis (quorum plurimi abortientes cito decidui) basi 2–3-bracteolatis; perigonium extus (cum apice ramulorum) glanduloso-viscidum, parte libera ex segmentis 5 inflexis post anthesin cum andrœcio et stylo simul decidua, tubo fructu adnato, quinquecostato, pilis nonnullis longioribus et glandulis subsessilibus vestito; antheræ tres; stigma capitatum.

Mar. merid.—In rupestribus collinis prope urbem Marocco primus detexit cl. G. Maw! In prov. Shedma anno 1873 specimen (in Herb. Kew. conservatum) legerunt cll. Rein et Fritsch!

B. elegans, Choisy, foliis ovatis bicoloribus plantæ nostræ aliquantulum accedit, sed inflorescentia diversa, perigonio non viscido, aliisque notis satis diversa. A *B. plumbaginea*, Cav., longius distat *B. maroccana* floribus ter minoribus, et ab omnibus mihi notis perigonii segmentis inflexis, genitalia includentibus.

ILLECEBREÆ (*R. Br. Prod.* 413).

Ordo naturalis a celeb. R. Brown anno 1810 definitus, jure prioritatis et nomine satis apto ab auctore imposito, posteris commendatur.

HERNIARIA (*L. Gen.* 308).

H. ANNUA (*Lag. Gen. et Sp.* 12),=H. cinerea (*DC. Fl. Fr.* v. 375, *et Prod.* iii. 367).

Mar. merid.—Satis frequens in regione inferiore et ad radices Atlantis Majoris. Prov. Shedma! Misra ben Kara! Mesfioua! Amsmiz! Mzouda! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. VIRESCENS,=H. virescens (*Salzm. Exsicc.*; *DC. Pr.* iii. 367).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Cap. Spartel! Tetuan (1851)!

Mar. occid.—Mazagan!

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia).

H. virescens non differt nisi indumento parco, et meram varietatem sistit. Spec. prope Mazagan lecta typo propiora fere intermedia sunt.

H. HIRSUTA (*L., DC. Pr.* iii. 367).

Mar. sept.—Prope ostium fluminis Tetuanensis (1851)!

Ar. Geog. Regio omnis Mediterranea. Europa media. Asia temperata.

Nescio an huc referenda sit *H. hirsuta* (Schousb. Gew. Marok. 107) in agro Tingitano inventa. Suspicor hanc ad *H. annuam* referendam esse.

H. POLYGONOIDES (*Cavan. Icon.* ii. 27, tab. 137; *DC. Pr.* iii. 368), =H. erecta (*Desf. Fl. Atl.* i. 214),=Illecebrum suffruticosum (*L. Sp. Pl.* 298),=Paronychia suffruticosa (*Lam. Fl. Fr.* iii. 230).

In regno Maroccano legit Broussonnet, fide Cavan. in An. Cienc. Nat. iii. 29.

Ar. Geog. Hispania australis. Africa boreali-occidentalis.

CORRIGIOLA (*L. Gen.* 378).

C. TELEPHIIFOLIA (*Pourr. Chlor. Narb.* 20; *DC. Pr.* iii. 367),=C. litoralis (*Schousb. Gew. Marok.* 131, *non L.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Cap. Spartel!

Ar. Geog. Verisimiliter per regionem fere omnem Mediterraneam dispersa. Deest in Macaronesia. *C. litoralis*, L., proxime affinis, etiam in Europa occidentali, necnon austro-orientali (Hungaria, Rossia media, et cet.), et secus litora Maris Caspii obvia est.

Hæc est *C. litorali* omnibus partibus major, radix sæpius (non semper) perennis; notæ diagnosticæ ex foliolis calycinis a Grenier et Godron in Fl. Fr. i. 614, indicatæ mihi non constantes videntur. Meo sensu pro subspecie *C. litoralis* enumeranda.

ILLECEBRUM (*L. Gen.* 290).

I. VERTICILLATUM (*L., DC. Pr.* iii. 370; *Schousb. Gew. Marok.* 103).

Mar. sept.—Tanger (*Webb Herb.*)! In aridis monte Djebel Kebir (*Schousb. l. c.*).

Mar. occid.—Mogador! (*Broussonnet ex Cavan. An. Cienc. Nat.* iii. 29).

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia). Europa occidentalis. Occurrit etiam in Dania, in Rossiæ insula Osilia, et in insula Corcyra.

PARONYCHIA (*Juss. Mém. Mus. Par.* i. 388).

P. CYMOSA (*L., et Schousb. Gew. Marok.* 103, sub *Illecebro*; *DC. in Dict. Encyc.* v. 26, *et Prod.* iii. 370).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir (*spec. ex Herb. Schousb.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia), a Gallia australi usque Lusitaniam; ex synonymo falso in Creta erronee indicatur.

P. ECHINATA (*Desf. Fl. Atl.* i. 204, sub *Illecebro*; *Lam. Fl. Fr.* iii. 232; *DC. Pr.* iii. 370),=Illecebrum cymosum (*Fl. Gr.* tab. 245, *non L.*).

Mar. sept.—Frequens in ditione Tingitana. Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir! Cap. Spartel! Inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia). In Oriente nonnisi in insulis Creta et Melo hucusque detecta.

P. ARGENTEA (*Lam. Fl. Fr.* iii. 230; *DC. Pr.* iii. 371),=Illecebrum Paronychia (*L., Schousb. Gew. Marok.* 103).

Species polymorpha per Imperium Maroccanum nobis notum a litore Oceani usque regionem superiorem vulgatissima. Varietates ægre definiendas maxima pro parte prætermisi.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*)! Tetuan (1851)!

Mar. occid.—Mazagan! Mogador! (*Lowe Cat.*). Prov. Haha prope Mogador! Aïn el Hadjar! Agadir (*Coll. Indig.* 1871)

Mar. merid.—Reraya! Aïn Tarsil! Aït Mesan! In ascensu jugi Tagherot usque 2900 m.! In convalle Amsmiz visa!

Ar. Geog. Regio omnis Mediterranea. In insulis Canariensibus rara.

—— ——, var. MAURITANICA (*DC. Pr. l. c.*),=Illecebrum mauritanicum, *Willd.*; differt foliis latioribus capitulis et remotioribus.

Mar. sept.—Cap. Spartel! Inter Tetuan et Ceuta!
Ma. occid.—Agadir (*Coll. Indig.* 1871)!

—— ——, var. sepalis glabris vix cucullatis.
Mar. occid.—Mogador!

—— ——, var. VELUTINA, foliis et caulibus pube brevi cinerea vestitis. Caules sæpe tantum latere superiore velutini.
Mar. merid.—In calidioribus regionis inferioris. Misra ben Kara! Milhaïn! Amsmiz!
Folia aqua decocta instar Theæ ab incolis utuntur.

PARONYCHIA CAPITATA (*L.*, sub *Illecebro*; *Lam. Fl. Fr.* iii. 229; *DC. Pr.* iii. 371), var. NIVEA,=P. nivea (*DC. in Dict. Encyc.* v. 25, *et Prod. l. c.*).
Mar. merid.—In convalle Aït Mesan circ. 1400 m.!

—— ——, var. ATLANTICA, *nob.* Forma a typo aspectu valde diversa sed vix notis stabilibus distincta. Folia parva numerosa obtusa recurvata pubescentia, stipulis lanceolato-acuminatis longiora; flores in capitula parva sæpius terminalia glomerati; bracteæ floribus vix longiores late obtusæ cuspidatæ. Facie *P. aretioidi*, DC., similis, differt foliis patulis demum recurvis, sepalis magis inæqualibus, acutioribus, ovato-lanceolatis.
Mar. merid.—Satis frequens in convalle Aït Mesan usque in ascensum jugi Tagherot a 2000 m. usque 2900 m.!
Ar. Geog. *P. capitata* per montes Europæ mediæ et regionis fere omnis Mediterraneæ (exclusa Macaronesia) diffusa est.
Notæ diagnosticæ quibus *P. nivea* a *P. capitata* distinguitur mihi videntur instabiles. Specimina Gallica a cll. Grenier et Godron (Fl. Fr. i. 611) imprimis sepalis in *P. capitata* æqualibus obtusis, in *P. nivea* valde inæqualibus acutis, distinguuntur; sec. cl. Willkomm et Lange (Fl. Hisp. iii. 151) sepala *P. niveæ* apice angustata, obtusa. In spec. permultis a me exploratis sepala video variabilia et ambigua, interdum subæqualia, sæpius tamen plus minusve inæqualia, semper nervosa præsertim in facie interiore. In specie homologa *P. argentea* stipulæ et bracteæ ludunt minores vel majores, latiores vel angustiores, unde mihi incertum videtur an *P. aretioides* pro specie probe diversa habenda sit. Varietas nostra *atlantica*, stipulis et bracteis in hoc grege minimis, et *P. aretioides*, DC., forsan melius sicut subspecies enumerandæ.

P. MACROSEPALA (*Boiss. Diagn. Pl. Or.* ser. 1, iii. 11, *et Fl. Or.* i. 745; *Ball in Journ. Bot.* 1875, 204).
Mar. merid.—Videtur satis frequens in aridis regionis inferioris et ad radicis Atlantis Majoris. Aïn Oumast! Mesfioua! Seksaoua! In rupestribus collinis prope urbem Marocco (*G. Maw*)! In convalle Aït Mesan circ. 1300 m.!

Stirpem hanc pro specie nova descripsi eodem nomine quo eam jampridem salutavit cel. Boissier. Frustula ex Attica quæ debeo humanitati cel. amici habent folia majora plana, et descriptioni Boissierianæ haud omnino conformia, tamen notis gravioribus omnino conveniunt. Adjeci descriptionem stirpis nostræ, unde differentiæ minores facilius emineant.

Planta perennis; caules numerosi prostrati; folia parva oblongo-ovata acutiuscula, dense pubescentia, demum patulo-recurva; stipulæ lanceolatæ, longiuscule acuminatæ; bracteæ ovato-lanceolatæ, abbreviatæ, sepalis vix æquilongæ; sepala subincrassata, vix aut ne vix nervosa, oblongo-linearia, obtusa, mutica, valde inæqualia, apice plus minusve recurva, etiam in præfloratione basi discreta; petala (vel staminodia?) minima, linearia; stylus brevis, profunde bifidus, ramis stigmatosis divaricatis; stamina brevissima, ima basi disco calycino adnata; antheræ breves.

A grege *P. capitatæ* differt imprimis sepalis (v. calycis segmentis) majoribus crassioribus subenerviis, valde inæqualibus, adeo ut sep. maximum minimo duplo longius est, fructiferis recurvis, nec clausis, petalis (v. staminodiis?) linearibus, nec nullis, antheris fere dimidio minoribus, stylo denique breviore.

—— ——, var. QUERIODES (*Ball in Journ. Bot. l. c.*). Bracteis brevioribus, foliis velutinis rigidiusculis approximatis, insigniter recurvis a typo recedit, et facie *Queriam hispanicam* simulat.

Mar. merid.—Specimen unicum legi in convalle Aït Mesan circ. 1400 m.!

Ad typum *P. macrosepalæ* relata fere ut var. nostra *atlantica*, *P. capitatæ*.

Ar. Geog. *P. macrosepala* hucusque in Græcia, Asia Minore, et in insulis adjacentibus, necnon in ditione Maroccana meridionali detecta, forsan alibi in regione Mediterranea calidiore invenienda.

SCLERANTHUS (*L. Gen.* 562).

S. ANNUUS (*L., DC. Pr.* iii. 378), var. VERTICILLATUS (*Fenzl, in Ledeb. Fl. Ross.* ii. 156),=S. verticillatus (*Tausch in Flora,* 1829.)

Mar. merid.—In monte Djebel Tezah circ. 2100 m.!

Ar. Geog. *S. annuus* per Europam omnem (exclusa arctica), Asiam mediam et regionem fere omnem Mediterraneam diffusa est. Adest in Abyssinia, sed ex Macaronesia non vidi.

AMARANTACEÆ (*R. Br. Prod.* 413).

AMARANTUS (*L. Gen.* 1068).

A. CHLOROSTACHYS (*Willd. Amarant.* 34, tab. 10. fig. 19; *Moq. in DC. Pr.* xiii. pars 2, 250).

Mar. merid.—Prov. Shedma juxta castellum Præfecti!

Ar. Geog. Regio fere omnis Mediterranea. In utraque America obvius, an indigenus?

A. BLITUM (*L., Moq. in DC. Pr.* xiii. pars 2, 263).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In prov. Shedma!

—— ——, var. GRÆCIZANS (*Moq. l. c.*),=A. græcizans, *L.*

Mar. occid.—Mazagan! Saffi!

Ar. Geog. Species variabilis per orbem terrarum (exceptis terris Australasicis) in temperatis calidioribus et subtropicis latissime diffusa.

A. ALBUS (*L., Moq. in DC. Pr.* xiii. pars 2, 264).

Mar. occid.—Mazagan!

Ar. Geog. Secundum auctores ex America boreali migrata, hodie spontanea in regione Mediterranea occidentali (exclusa Macaronesia).

A. DEFLEXUS (*L., Willd. Amarant.* 10, tab. 10. fig. 20),=A. prostratus (*Balb. Misc. Bot.* 44, tab. 10),=Euxolus deflexus (*Rafin. Fl. Tell.* 42; *Moq. in DC. Pr.* xiii. pars 2, 275).

Mar. sept.—Tanger! (*spec. ex Herb. Schousboe*)!

Ar. Geog. Species per regionem Mediterraneam occidentalem, et Europam austro-occidentalem diffusa. In America meridionali advena? Deest in Macaronesia.

ACHYRANTHES (*L. Gen.* 113).

A. ARGENTEA (*Lam. Dict.* i. 545; *Moq. in DC. Pr.* xiii. pars 2, 315; *Schousb. Gew. Marok.* 101).

Mar. sept.—Tanger! In fruticetis regionis Tingitanæ (*Schsb. l. c.*). Tetuan (1851)!

Mar. occid.—Salli (*Broussonnet ex Cavan. in Anal. Cienc. Nat.*).

Ar. Geog. Africa borealis. Arabia Felix. Sicilia. Sardinia. Italia meridionalis. In Hispania nonnisi ad Gibraltar. Macaronesia. Senegambia. Africa australis.

POLYCNEMUM (*L. Gen.* 53).

P. FONTANESII (*Durieu et Moq. in DC. Pr.* xiii. pars 2, 335).

Mar. occid.—Casa Blanca (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Ad radices Atlantis Majoris haud infrequens. Tasseremout! Ourika! Aït Mesan circ. 1300 m.!

Ar. Geog. Africa boreali-occidentalis.

In spec. nostris folia nunquam subrecurva.

CHENOPODIACEÆ (*Lindl. Nat. Syst.* ed. 2, 208).

BETA (*L. Gen.* 310).

B. VULGARIS (*L., Moq. in DC. Pr.* xiii. pars 2, 55), var. MARITIMA (*Moq. l. c.* 56), = B. maritima (*L., Willk. et Lge. Fl. Hisp.* i. 274).

Mar. sept.—Tanger (*J. D. H.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Occurrit hinc inde in regione inferiore. Sheshaoua! In ruderatis urbis Marocco! Seksaoua!

Ar. Geog. B. vulgaris verisimiliter sponte nascitur in regione omni Mediterranea, in Europa media et occidentali, et in India orientali.

Beta Cicla (Willd. Sp. Pl. i. 1309), a Schousboe (Gew. Marok. 108) prope Tingim indicata, est forma *B. vulgaris* culta vel ex cultura evasa.

CHENOPODIUM (*L. Gen.* 309).

C. OLIDUM (*Curt. Fl. Lond.* v. tab. 20; *Eng. Bot.* tab. 1034), = C. fœtidum (*Lam. Fl. Fr.* iii. 244, *non Schrad.*), = C. Vulvaria (*L., Moq. in DC. Pr.* xiii. pars 2, 64).

Mar. occid.—Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In ruderatis urbis Marocco!

Ar. Geog. Europa media et australis. Africa borealis.

C. OPULIFOLIUM (*Schrad. in DC. Fl. Fr.* v. 352; *Moq. in DC. Pr.* xiii. pars 2, 67).

Mar. sept.—Vidi nondum florens prope Tanger!

Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia). In America boreali obvium sed verisimiliter advena.

C. MURALE (*L., Moq. in DC. Pr.* xiii. pars 2, 69; *Schousb. Gew. Marok.* 108).

Mar. sept.—Prope Cap. Spartel!

Mar. occid.—Casa Blanca! Mogador (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Sheshaoua! In ruderatis urbis Marocco! Seksaoua!

Ar. Geog. Herba amphigea per Europam temperatam, regionem omnem Mediterraneam, Indiam orientalem, et Africam australem diffusa; etiam in America australi et in Australia obvia.

C. ALBUM (*L., Moq. in DC. Pr.* xiii. pars 2, 70).

Mar. occid.—Saffi! Mogador! (*Lowe Cat.*).

Ar. Geog. Regio omnis Mediterranea. Europa media et borealis (exclusa arctica). Asia media et calidior. Obvium etiam in America boreali, nec non in insulis Sandwich.

C. AMBROSIOIDES (*L., Moq. in DC. Pr.* xiii. pars 2, 72; *Schousb. Gew. Marok.* 108).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Legimus nondum florens in ruderatis urbis Marocco! et ad radices Atlantis Majoris prope Gurguri!

"In locis arenosis depressis udis raro occurrit" (*Schsb. l. c.*).

Ar. Geog. Verisimiliter ex zona tropica in Europam et alio introducta, hodie herba cosmopolita per totum orbem in temperatis calidioribus et in tropicis diffusa. Rarius occurrit in Europa media vestigia hominum secuta.

ATRIPLEX (*L. Gen.* 1153).

A. LACINIATA (*L., Moq. in DC. Pr.* xiii. pars 2, 93).

Mar. sept.—Tanger (Salzm. Exsicc. in herb. Gay, sub *A. laciniata* et *A. glauca*)!

Mar. merid.—In regione inferiore solo gypsaceo. Sheshaoua! Misra Ben Kara! In planitie prope urbem Marocco (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. In litoribus Europæ occidentalis et regionis omnis Mediterraneæ (inclusa Macaronesia). Occurrit etiam in America septentrionali.

A. laciniata et *A. rosea,* L., sunt species arcte affines et valde ludibundæ, ab auctoribus sæpe confusæ. Loci natales igitur non semper certi.

A. PATULA (*L., Moq. in DC. Pr.* xiii. pars 2, 95).

Mar. sept.—Prope Tanger nondum florentem vidi!

Ar. Geog. Europa fere omnis (excepta arctica). Regio Mediterranea fere omnis (exclusa Macaronesia).

A. PARVIFOLIA (*Lowe, Prim. Fl. Mad.* 16; *Moq. in DC. Pr.* xiii. pars 2, 99, *non Kunth*).

Mar. occid.—Saffi in maritimis! In rupibus insulæ Mogador

Ar. Geog. Macaronesia. Marocco occidentalis.

A. HALIMUS (*L., Moq. in DC. Pr.* xiii. pars 2, 100).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. merid.—Sheshaoua! Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea omnis, imprimis litoralis. Africa australis. Indicatur etiam in utraque America, an indigena?

OBIONE (*Gærtn. Fruct.* ii. 198).

O. PORTULACOIDES (*L.,* sub *Atriplici*; *Moq. Chenop. Enum.* 75, *et in DC. Pr.* xiii. pars 2, 112).

Mar. sept.—Vidi nondum florentem prope Tanger! (*Spec. ex Herb. Schousboe comm. Cosson*)!

Ar. Geog. Litora Atlantica Europæ occidentalis et regionis fere omnis Mediterraneæ (exclusa Macaronesia). Occurrit etiam in Africa australi et in America boreali.

CHENOLEA (*Thunb. Nov. Gen. Pl.* 9).

C. CANARIENSIS (*Moq. Chenop. Enum.* 96; *et in Webb Phyt. Canar.* iii. 205, tab. 200),=C. lanata (*Moq. in DC. Pr.* xiii. pars 2, 129),= Salsola lanata (*Masson in Buch. Beschr. Can.* 141, *non Gmel., nec Pall., nec Vahl, nec Poll.*).

Mar. occid.—In rupibus insulæ Mogador!

Ar. Geog. Stirps monotypica Macaronesiæ et litoralis Maroccanæ propria.

Nomen triviale *lanata Salsolis* plurimis alienis olim applicata nulla prioritate gaudet, et nomen *canariensis* jamdudum a cel. auctore evulgatum non mutandum videtur.

SALICORNIA (*L. Gen.* 10).

S. FRUTICOSA (*L. Sp. Pl.* ed. 2, 51, pro parte; *Ungern-Sternberg in Atti Congr. Bot. Fir.* 294, et verisimiliter *Schousb. Gew. Marok.* p. 1), = Arthrocnemum fruticosum (*Moq. Chenop. Enum.* iii., *et in DC. Pr.* xiii. pars 2, 151, pro parte).

In arenosis maritimis totius imperii (*Schsb. l. c.*).

Mar. merid.—Nondum florentem legimus in saxosis solo gypsaceo prope Sheshaoua!

Synonymon Schousbœanum forsan ex parte ad *Arthrocnemum glaucum* referendum.

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Europa occidentalis. Africa australis. America fere omnis. In litore maris vel rarius in solo salso vel gypsaceo a mari longinquo.

ARTHROCNEMUM (*Moq. Chenop. Enum.* 111).

A. GLAUCUM (*Del. Fl. Eg.* 69; *Ungern-Sternberg in Atti Congr. Bot. Fir.* 283),=A. fruticosum (*Moq. l. c., et in DC. Pr.* xiii. pars 2, 151, pro parte),=Salicornia macrostachya (*Moric. Fl. Ven.* i. 2; *Guss. Prod. Fl. Sic.* i. 2).

Mar. sept.—? Fere certe in arenosis pro Tanger visum!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia) et in insulis Capitis Viridis. Americæ borealis dubia civis.

Clar. Ungern-Sternberg loc. cit. gregem *Salicorniearum* eximie tractavit, et observationibus accuratis illustravit.

Stirpes supra enumeratæ aspectu ægre dignoscendæ, ab auctoribus sub *Salicornia fruticosa* vel *Arthrocnemo fruticoso* semel confusæ, nunc in generibus diversis criterio securo separandæ sunt. Structura seminis in *Salicornia* albumine carentis, embryone conduplicato, in *Arthrocnemo* albumine præditi, embr. virgulæformi, immo ratio vitalis totius plantæ omnino diversa. Cæterum diagnosin harum specierum cll. Willkomm et Lange (Fl. Hisp. i. 263, 264) jampridem recte indicarunt.

SUÆDA (*Forsk. Fl. Æg.-Arab.* 62).

S. FRUTICOSA (*Forsk. Fl. Æg.-Arab.* 70; *Moq. in DC. Pr.* xiii. pars 2, 156),=Salsola fruticosa (*L., Eng. Bot.* tab. 635; *Schousb. Gew. Marok.* 109).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Saffi! Mogador! (*Schsb. l. c.*).

Mar. merid.—Nondum florens sed fere certa in solo gypsaceo prope Sheshaoua! et Misra Ben Kara!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa occidentalis. Senegal. Indicatur etiam in California.

S. MARITIMA (*L.*, sub *Chenopodio*; *Dumort. Fl. Belg.* 22),=Chenopodina maritima (*Moq. in DC. Pr.* xiii. pars 2, 164).

Mar. merid.—Nondum florens sed fere certa in solo gypsaceo prope Sheshaoua!

Ar. Geog. Regio omnis Mediterranea. Europa occidentalis et media. Fertur etiam in insula Cuba et in ins. Sanctæ Helenæ.

CAROXYLON (*Thunb. Gen. Nov. Pl.* 37).

C. ARTICULATUM (*Moq. in DC. Pr.* xiii. pars 2, 175),=Salsola articulata (*Cav. Icon.* iii. 43, tab. 284, *non Forsk.*),=Halogeton articulatum (*Bunge in Lehm. Rel.*).

Mar. merid.—Legimus prope Sheshaoua solo gypsaceo!

Ar. Geog. Hispania australis. Ægyptus. Marocco meridionalis.

SALSOLA (*L. Gen.* 311).

S. VERMICULATA (*L., Moq. in DC. Pr.* xiii. pars 2, 181), var. *a*, FLAVESCENS (*Moq. l. c.*),=S. flavescens (*Cavan. Icon.* iii. 45, tab. 288).

Mar. sept.—Tanger (*Salzmann sec. Moq. l. c.*).

—— ——, var. MICROPHYLLA (*Moq. l. c.*),=S. microphylla (*Cavan. Icon.* iii. 45, tab, 287),=S. brevifolia (*Desf. Fl. Atl.* i. 218; *Salzm. Exsicc.*)!

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. merid.—? Sheshaoua (nondum florens et subincerta)!

Ar. Geog. Regio Mediterranea calidior (inclusa Macaronesia). Asia media. Deest in Gallia et in Italia continentali. Var. in regione Mediterranea imprimis occidentali.

S. LONGIFOLIA (*Forsk. Fl. Æg.-Arab.* 55; *Moq. in DC. Pr.* xiii. 182, *non Lam.*).

Mar. occid.—Legimus in insula Mogador et in arenosis prope urbem!

—— ——, var. VERTICILLATA,=S. verticillata (*Schousb. Gew. Marok.* 109).

Mar. occid.—In insula Mogador (*Schsb. l. c.*).

Mar. merid.—Hinc inde in regione inferiore obvia. Seksaoua! In glareosis Oued en Fisk prope Gurguri! Ourika (*R. et Fr. spec. in Herb. Kew.*)! Inter Sektana et Frouga (*G. Maw*)!

Differt a typo foliis brevioribus tenuioribus subverticillatis.

Ar. Geog. Species per Africam borealem dispersa, etiam in Hispania austro-orientali et in Macaronesia obvia. Var. *verticillata* nonnisi in Marocco meridionali et in insulis Canariensibus detecta.

SALSOLA KALI (*L., Ten. Syll. Fl. Nap.* 124; *Moq. in DC. Pr.* xiii. pars 2, 187).

Mar. occid.—Casa Blanca!

Spec. nostra ad var. *α*, *hirtam* (Moq. l. c.) referenda.

Ar. Geog. In litoribus fere omnibus Europæ, Asiæ, Africæ borealis et Americæ septentrionalis (exceptis terris arcticis) diffusa.

Inter *Chenopodiaceas* plurimas in solo gypsaceo enatas a nobis prope Seksaoua lectas adsunt specimina nondum florentia prorsus incerta, ex foliis et habitu ad *Camphorosmæ* speciem forsan referenda.

Cll. Rein et Fritsch prope Mogador legerunt specimen nondum florigerum verisimiliter ad *Anabasin articulatam* (Moq. in DC. Pr. xiii. pars 2, 214) referendum. Planta ulterius inquirenda.

THELYGONUM (*L. Gen.* 1098).

T. CYNOCRAMBE (*L., Koch, Syn. Fl. Germ.* 703), = Cynocrambe prostrata (*Gærtn. Fruct.* i. 362, tab. 75; *A. DC. in Prod.* xvii. 33).

Mar. sept.—In monte Beni Hosmar prope Tetuan! Exstat in herb. Webb verisimiliter prope Tetuan lectum!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Præeuntibus celebb. Lindley et G. D. Koch, Alph. De Candolle loco suo vero in serie naturali *Salsolis* proximo hanc plantam dubiæ affinitatis collocavit. Minus fauste nomen genericum Linnæanum ab auctoribus fere omnibus recentioribus receptum mutare statuit.

POLYGONEÆ (*Juss. Gen.* 82).

EMEX (*Neck. Elem.* ii. 214).

E. SPINOSA (*L., et Schousb. Gew. Marok.* 169, sub *Rumici*; *Campd. Rum.* 58, tab. 1; *Meisn. in DC. Pr.* xiv. 40).

Mar. sept.—Tanger! (*Schsb. l. c.*).

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Pluries visa in prov. Shedma et alibi!

Ar. Geog. Regio omnis Mediterranea, imprimis litoralis. In Brasilia introducta.

RUMEX (*L. Gen.* 357).

R. CRISPUS (*L., Meisn. in DC. Pr.* xiv. 44).

Mar. merid.—In hortis et ruderatis urbis Marocco!

Ar. Geog. Species cosmopolita ex temperatis frigidioribus usque in zonam æquinoctialem fere ubique diffusa, rarior tamen in calidioribus. Ex Macaronesia non vidi.

RUMEX CONGLOMERATUS (*Murr. Prod. St. Gott.* 52; *Meisn. in DC. Pr.* xiv. 49), = R. acutus (*Sm. Fl. Brit. et E. Bot.* tab. 724).
Mar. occid.—Mogador (*Lowe Cat.*).
Mar. merid.—Mzouda! Prope Amsmiz visa!
Ar. Geog. Europa fere omnis (exclusa arctica). Oriens. Teneriffa, Africa borealis et australis. America borealis.

R. PULCHER (*L., Meisn. in DC. Pr.* xiv. 58).
Mar. sept.—Tetuan (1851)!
Mar. occid.—Casa Blanca!
Mar. merid.—Sheshaoua! In glareis Oued en Fisk pr. Gurguri (*J. D. H.*)!
Ar. Geog. Regio omnis Mediterranea. Europa media. Africa australis. In Brasilia, forsan introducta.

R. BUCEPHALOPHORUS (*L., Schousb. Gew. Marok.* 168; *Meisn. in DC. Pr.* xiv. 62).
Mar. sept.—Species in ditione Tingitana vulgatissima. Tanger! (*Schsb. l. c.*). In monte Djebel Kebir! Cap. Spartel! Inter Tanger et Tetuan! Tetuan (1851)! In monte Beni Hosmar! Inter Tetuan et Ceuta!
Mar. occid.—Mazagan! Mogador! Agadir (*Coll. Indig.* 1871)!
Mar. merid.—Occurrit hinc inde, rarius tamen quam in regione sublitorali. Seksaoua (*J. D. H.*)! Mtouga!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

R. INTERMEDIUS (*DC. Fl. Fr.* vi. 369; *Meisn. in DC. Pr.* xiv. 65).
Mar. sept.—Legi mox floribundum prope urbem Tetuan et ad ostium fluminis mense Junio, 1851!
Ar. Geog. Europa austro-occidentalis ex Sicilia usque fretum Herculis. Spec. Africana præter nostra non vidi.
Radix in spec. nostris et in plurimis Europæis in Herb. Kew. conservatis horizontalis vel oblique descendens. Spec. prope urbem Tetuan lectum habet indumentum ex pilis brevioribus papillaribus ut in *R. papillari* (Boiss. et Reut. Pug. 107), quæ mihi omnino var. *R. Acetosæ* videtur.

R. THYRSOIDES (*Desf. Fl. Atl.* i. 321; *Meisn. in DC. Pr.* xiv. 66).
Mar. sept.—Legi inter Tetuan et Ceuta!
Ar. Geog. Africa borealis. Insulæ Italicæ majores (Sicilia, Sardinia, Corsica). In Hispania nonnisi prope Gibraltar.

R. TINGITANUS (*L., Meisn. in DC. Pr.* xiv. 67; *Schousb. Gew. Marok.* 169).

Mar. sept.—In arenosis maritimis pr. Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schousb. l. c.*).

Zanoni primus hanc speciem publici juris fecit et icone satis bona illustravit anno 1675. Confer 'Istoria Botannica,' p. 14, fig. 5 (nec 6 ut habet Meisner l. c.). Semina et spec. exsiccata Tingitana Zanoni habuit anno 1664 ab Alexandro Balam mercatore Anglico, qui serius semina et specimina Morisonio præbuit.

Ar. Geog. Species per regionem Mediterraneam imprimis occidentalem dispersa. Fertur in insulis Græciæ, sed deest in Oriente continentali. Forma arcte affinis (*R. maderensis,* Lowe) in Macaronesia.

Rumex pictus (*Forsk. Fl. Æg.-Arab.* 77),=R. lacerus (*Balb. Miscell.* 19; *Meisn. in DC. Pr.* xiv. 69),=R. bipinnatus (*L. fil. Suppl.* 211; *Schousb. Gew. Marok.* 169).

Verisimiliter est etiam *R. roseus* (Desf. Fl. Atl. i. 320, et Poir. Dict. v. 65, non L.).

Mar. occid.—Frequens et satis ludibundus occurrit in arenosis juxta urbem Mogador! et in proxima prov. Haha meridiem versus! (*Schsb. l. c.*).

Stirps nostra ludit foliis simpliciter pinnatifidis ut in spec. orientalibus, vel bipinnatifidis ut in descript. Schousbœana. Flores vidi masculos et hermaphroditos in eodem racemo, nec, ut vult cel. Meisner l. c., dioicos. Hæc nota tamen in grege *R. Acetosæ* certe variabilis.

R. pictus est procul dubio ipsissimus *R. lacerus,* Balb., in arenosis Ægypti inferioris ad Rosetta alibique obvia, nomen igitur antiquius prioritate gaudet.

R. pictus a *R. tingitano* differt statura humiliore, caulibus e collo radicis valde ramosis, foliis profundius divisis, valvis subcallosis. In *R. tingitano* nervus medius valvarum nec incrassatum nec (nisi rarius ad imam basin) prominens, dum in *R. picto* nervus ad basin valvarum prominens sæpius in callum parvum lanceolatum incrassatum. Pro subspecie *R. tingitani* enumerandus.

Ar. Geog. *R. pictus* in arenosis Africæ borealis et Arabiæ et Syriæ obvius est.

R. SCUTATUS (*L., Meisn. in DC. Pr.* xiv. 69), var. INDURATUS, *nob.*, =R. induratus (*Boiss. et Reut. Pug.* 107).

Mar. merid.—In convalle Aït Mesan a 1500 m. usque 2000 m.! In jugo Tagherot (*R. et Fr. spec. in Herb. Kew.*)! Spec. ex monte Djebel Ouensa ab indigeno Ibrahim lecta benev. comm. cel. Cosson!

R. induratus, Boiss. et Reut., pluries a me in Hispania lectus, mihi videtur mera varietas *R. scutati.* Spec. nostra Atlantica fere intermedia sunt sed stirpi Boissierianæ propiora.

Ar. Geog. *R. scutatus* per Europam fere omnem (exclusa arctica) et in montibus regionis Mediterraneæ late diffusa est. Deest in Macaronesia et in Insulis Britannicis. Varietas *induratus* in peninsula Iberica et in Atlante Majore.

Rumex Papilio (*Coss. in Bull. Soc. Bot. Fr.* xx. 260).

Sequitur descriptio Cossoniana:—

" Planta *perennis*, pluricaulis, glaberrima, caudice brevissimo verticali in radicem fusiformem sublignosam abeunte. Caules erecti, adscendentes vel diffusi, superne ramosi, ramis divergentibus. *Folia* omnia petiolata, inferiora ovato-oblonga sæpe in parte inferiore latere altero angulo præminente donata, media *ovato-triangularia* acuta basi *hastata* auriculis divergentibus vel divaricatis, superiora linearia, ocreis ovato-oblongis margine integris. *Flores polygamo-monoici,* in racemos paucos laxos aphyllos paniculam generalem efformantes dispositi, fasciculati, fasciculis 2–5-floris remotis, pedicellis tenuiter filiformibus arcuato-deflexis. Calycis laciniæ exteriores oblongo-lineares primum erectæ, dein reflexæ; *valvæ accrescentes, demum diaphano-membranaceæ, tenuiter venosæ* venis vix prominulis, margine denticulatæ, ambitu orbiculato-subrhombeæ, *supra medium utrinque profunde incisæ et inde quadrilobæ* lobis inferioribus ovato-suborbiculatis, superioribus minoribus oblongis divergentibus, in disco pilis paucis papilliformibus donatæ, basi callo destitutæ vel una alteraque callo obsoleto prædita.

R. Papilio, e forma valvarum papilionem referentium denominatus, in sectione *Acetosa* (Meisn. in DC. Prod. xiv. 64) juxta *R. scutatum,* L., collocandus, sed ab illo et cæteris speciebus affinibus valvis quadrilobis eximie distinctus."

Mar. merid.—In faucibus amnis Ghaghaia ad meridiem urbis Marocco primus legit Balansa sec. Cosson l. c. Specimen unicum in convalle Aït Mesan legit cel. J. D. Hooker!

Nisi valvarum forma planta hæc a *R. scutato* ægre distinguenda. Pace auctoris amicissimi hæc mihi videtur subspecies, vel forsan lusus singularis *R. scutati.*

In spec. Hookeriano desunt pili papilliformes in disco ab auctore indicati.

R. VESICARIUS (*L., Meisn. in DC. Pr.* xiv. 70), var. RHODOPHYSA (*Ball in Journ. Bot.* 1875, 205).

Differt a typo radice bienni, anno primo caules plurimos breves ramosos emittens. In his racemus abbreviatus pauciflorus, pedunculi florum geminorum brevissimi paulo infra medium articulati, valvæ maximæ, pulchre roseæ, alis reflexe plicatis adhærentibus, interdum callosis, callo inter alas latente, nervo marginali nullo. Anno secundo caulis fit altior alterne ramosus.

Mar. merid.—Legimus fructiferum circ. 1500 m. s. m. in monte prope Seksaoua!

Pedicellis brevissimis, et radice multicauli *R. roseus* (L., Meisn. l. c. 71) plantæ nostræ simillimus, differt tamen valvis margine nervo continuo spinuloso-ciliato cinctis.

Ar. Geog. *R. vesicarius* per regiones tropicas orbis veteris, Asiam Mediterraneam calidiorem et Africam borealem (inclusis ins. Canariensibus) late dispersa est, nullibi, ut videtur, communis. In Europa nonnisi in Sicilia et Græcia hucusque detectus. In insula St.-Helenæ indicata et (quod mirum) in insula Cuba.

POLYGONUM (*L. Gen.* 495).

P. EQUISETIFORME (*Sibth. et Sm. Prod. Fl. Gr.* i. 266; *Meisn. in DC. Pr.* xiv. 85), var. TRIGYNUM (*Boiss. Voy. Esp.* 554), = P. suffruticosum (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Inter Tetuan et Ceuta in salsis uliginosis nondum florens!

Specimina omnia quæ vidi ad var. *trigynum* referenda. Auctores Fl. Græcæ specimina ex insula Creta fl. digynis descripserunt, an errore aliquo vel forsan ex lusu abnormali?

Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia). In Europa nonnisi in Hispania et Græcia obvia.

P. MARITIMUM (*L., Meisn. in DC. Pr.* xiv. 88; *Schousb. Gew. Marok.* 178).

Mar. sept.—"In arena mobili juxta Tingidem" (*Schsb. l. c.*). In arenosis maritimis a Promontorio Spartel meridiem versus!

Mar. occid.—Mazagan! Mogador! (*Lowe Cat.*).

Ar. Geog. In litoribus Atlanticis Europæ et Africæ boreali-occidentalis ex Hibernia usque insulas Canarienses; inde per litora omnia maris Mediterraneæ et Ponti Euxini diffusa. In litore Atlantico Americæ borealis etiam obvium.

P. AVICULARE (*L., Meisn. in DC. Pr.* xiv. 97; *Schousb. Gew. Marok.* 178).

Mar. sept.—Tanger (*Schousb. l. c.*).

Mar. merid.—In ruderatis urbis Marocco! In convalle Aït Mesan supra Arround, circ. 2100 m.!

Ar. Geog. Species cosmopolita per orbem fere omnem e regionibus arcticis usque zonam torridam, et in insulis Oceanicis diffusa.

P. litorale (*Link in Schrad. Journ.* i. 54; *Meisn. in DC. Pr.* xiv. 98).

Mar. occid.—In maritimis prope Mazagan!

Ar. Geog. In litore Atlantico Europæ occidentalis et Imp. Maroccani. Occurrit etiam hinc inde in litore maris interni. Indicatur etiam in Sibiria et in America boreali. Spec. Africana præter nostra non vidi.

Proles *P. avicularis* habitu proprio sed notis nullis gravioribus distincta, pro subspecie enumeranda.

P. SERRULATUM (*Lag. Gen. et Sp.* 14; *Meisn. in DC. Pr.* xiv. 110), var. SALICIFOLIUM,=P. salicifolium (*Delile, Fl. Eg.* 12; *Meisn. l. c.*), =P. Pseudohydropiper (*Salzm. Exsicc.*).

Mar. sept.—Prope Tanger in maritimis! (*Salzm. Exsicc.*)!

Ar. Geog. Species per regionem omnem Mediterraneam diffusa, occurrit etiam in Africa tropica et australi, in Australasia et in insula Java. Varietas nostra hinc inde in regione Mediterranea calidiore.

P. salicifolium distinguitur ocreis apice integerrimis, vel breviter ciliatis, nec ciliis longis rigidiusculis munitis. Forsan pro subspecie enumerandum?

THYMELEÆ (*Adans. Fam. Pl.* ii. 14).

DAPHNE (*L. Gen.* 485).

D. GNIDIUM (*L., Meisn. in DC. Pr.* xiv. 538; *Schousb. Gew. Marok.* 175).

Mar. sept.—Tanger! (*Schsb. l. c.*).

Mar. occid.—Casa Blanca! (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Ad radices Atlantis Majoris, unde in convalles interiores se protendit. Aït Mesan usque 2000 m.! Ourika (*R. et Fr. spec. in Herb. Kew.*)! In convalle Amsmiz visa!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

D. LAUREOLA (*L., Meisn. in DC. Pr.* xiv. 539).

Mar. merid.—In convalle Aït Mesan a 1600 m. usque 1800 m.! Spec. ex monte Djebel Ouensa ab indigeno Ibrahim lecta benevole comm. cel. Cosson.

—— ——, var.? HOSMARIENSIS, *nob.* Specimina incompleta die 12 Aprilis 1871 lecta, fructu unico brevissime pedicellato, a typo foliis tenuioribus subtus glaucescentibus diversa sunt. Planta ulterius inquirenda.

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Ar. Geog. D. Laureola per Europam mediam et in montosis Europæ australis et Asiæ Minoris diffusa est. Adest in ins. Azoricis. Specimina Africana præter nostra non vidi.

PASSERINA (*L. Gen.* 487).

P. ARVENSIS (*Lam. Fl. Fr.* iii. 218, *et Meisn. in DC. Pr.* xiv. 551, sub *Thymelæa*),=P. annua (*Wikstr. Thymel. in Act. Holm.* 320; *Spreng. Syst.* ii. 239; *Gren. et Godr. Fl. Fr.* iii. 60),=P. Stellera (*Coss. et Germ. Fl. Par.* 478),=Thymelæa Passerina (*Lange in Willk. et Lge. Fl. Hisp.* i. 298),=Stellera Passerina (*L. Sp. Pl.* 512; *Rchb. Ic. Fl. Germ.* No. 1167).

Mar. merid.—Occurrit hinc inde in regione inferiore. Mzouda! Mesfioua (*G. Maw*)! In collibus saxosis pr. urbem Marocco (*G. Maw*)! Reraya (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Europa media. Sibiria Altaica. In regione Mediterranea fere omni (exclusa Macaronesia).

PASSERINA VIRGATA (*Desf. Fl. Atl.* i. 331, tab. 95), = Thymelæa virgata (*Meisn. in DC. Pr.* xiv. 552).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. merid.—Ourika! (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. BROUSSONNETII, *nob.* Foliis inferioribus et mediis viridibus glaberrimis, nec, ut in typo, sericeo-villosis incanis.

Vidi spec. ex Imp. Maroccano a Broussonnet lectum in herb. Gouan hodie Kewensi, et simile habuit Desfontaines in 'Fl. Atlantica' l. c. memoratum.

Mar. merid.—In regione inferiore Atlantis Majoris legimus in convalle Aït Mesan circ. 1400 m.! et in convalle Amsmiz!

Ar. Geog. Africa boreali-occidentalis. Spec. Hispanica ex loco non indicato vidit Lange.

P. VILLOSA (*L.*, sub *Daphne*; *Wikstr. Thymel. in Act. Holm.* 1818, 332), = Thymelæa villosa (*Endl. Gen. Suppl.*; *Meisn. in DC. Pr.* xiv.), = Passerina tingitana (*Salzm. Esicc.*).

Mar. sept.—Tanger (*Salm. Exsicc.*)! In monte Djebel Kebir!

Ar. Geog. Peninsula Iberica. Ditio Tingitana.

A b. Meisner, l. c., indicatur in Teneriffa fide Bory St. Vincent. In catalogo tamen (in opere 'Iles Fortunées') deest hæc species, nec ab aliis scriptoribus memoratur. Eodem modo planta dubitative "ex Oriente" (Herb. DC.) enumerata fere certe erronea.

P. CANESCENS (*Schousb. Gew. Marok.* 176; *Willd. Sp. Pl.* ii. 432), = Thymelæa canescens (*Meisn. in DC. Pr.* xiv. 556).

Mar. sept.—"Passim in regione Tingitana" (*Schsb. l. c.*).

Legi in altero latere freti Herculis prope San Roque, sed in ditione Tingitana a nobis non visa.

Ar. Geog. Hispania australis. Ditio Tingitana.

P. HIRSUTA (*L.*, *Schousb. Gew. Marok.* 176), = Thymelæa hirsuta (*Endl. Gen. Suppl.*; *Meisn. in DC. Pr.* xiv. 557).

Mar. sept.—Tanger (*Schsb. l. c.*). Prope lacum salsum (*Webb Herb.*)!

Mar. centr.—Mequinez (*Schsb. l. c.*).

Mar. occid.—Casa Blanca (*R. et Fr. spec. in Herb. Kew.*)! Aïn el Hadjar haud procul Mogador!

Mar. merid.—Videtur infrequens. Legimus semel ad radices Atlantis Majoris prope Seksaoua!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

Auctores recentiores duce cel. Endlicher genus Linnæanum *Passerina* ad species duas Capenses limitarunt, et species regionis Mediterraneæ sub genere *Thymelæa* reduxerunt (inclusa *Stellera Passerina*, L.). Auctor generis *Thymelæa* dicitur Tournefort in Instit. R. Herbariæ, p. 594. Tournefort tamen genus nullo criterio definivit, et species omnes hodie ad *Daphnem, Passerinam, Gnidiam* aliaque genera affinia relatas sub *Thymelæa* semel conjunxit, eodem pacto quo Cupani cæterique auctores antiquiores vocem *Thymelæa* adhibuerunt. Ducibus Grenier et Godron ego nomen genericum Linnæanum pro hac grege servavi.

LAURINEÆ (*DC. Théor. Elém.* 247).

LAURUS (*L. Gen.* 503).

L. NOBILIS (*L., DC. Pr.* xv. pars 1, 233; *Schousb. Gew. Marok.* 179).

Mar. sept.—Tanger in dumetis et sylvis (*Schsb. l. c.*). Vidimus in monte Djebel Kebir non certe spontanea! Prope Tetuan ad radices montis Beni Hosmar verisimiliter indigena!

Ar. Geog. In regione fere omni Mediterranea (exclusa Macaronesia) hodie spontanea. Secundum auctores ex Asia Mediterranea in Europam et Africam allata; sententia, ut videtur, valde incerta.

SANTALACEÆ (*R. Br. Prod.* 350).

OSYRIS (*L. Gen.* 1101).

O. ALBA (*L., DC. Pr.* xiv. 633).

Mar. sept.—Inter Tanger et Tetuan! Prope Tetuan!

Mar. merid.—Supra Amsmiz! Ourika (*J. D. H.*)!

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia).

O. LANCEOLATA (*Hochst. et Steud. in Pl. Exsicc. Un. Itin.* 1832; *A. DC. in DC. Pr.* xiv. 633), = O. quadrifida (*Salzm. Exsicc.* 1825), = O. quadripartita (*Dcne. in Ann. Sc. Nat.* sér. 3, vi. 65, tab. 6).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! In insulis Zafarinis (*Webb spec.*)!

Mar. merid.—Occurrit rarius ad radices Atlantis Majoris. Prope Gurguri! Inter Sektana et Frouga (*G. Maw*)! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Nomen triviale Decaisneanum primum typis evulgatum, nomen Salzmannianum antiquius; ambo tamen impropria, flores enim, ut jam monuit cel. A. DC. l. c., sæpius trimeri etsi interdum tetrameri.

Ar. Geog. Africa borealis. Peninsula Iberica.

THESIUM (*L. Gen.* 292).

T. HUMILE (*Vahl, Symb.* iii. 43; *DC. Pr.* xiv. 651).

Mar. merid.—In monte supra Seksaoua circ. 1400 m.!

Ar. Geog. Regio Mediterranea calidior (inclusa Macaronesia). In Austria prope Wiener Neustadt (*fide Koch, Syn. Fl. Germ.* ed. 3, 539); an casu aliquo cum seminibus introductum?

ARISTOLOCHIEÆ (*Endl. Gen. Plant.* 114).

ARISTOLOCHIA (*L. Gen.* 1022).

A. PISTOLOCHIA (*L., DC. Pr.* xv. pars 1, 485).

Mar. merid.—In convalle Aït Mesan circ. 1600 m. !

Ar. Geog. Regio Mediterranea occidentalis, ex litorali Nicæensi usque Lusitaniam. Occurrit in Imp. Maroccano et in Sardinia. Ex Algeria non vidi, et deest in Macaronesia.

A. LONGA (*L., Duchartre in DC. Pr.* xv. pars 1, 486),=A. pallida (*Salzm. Exsicc., non Willd.*).

Mar. sept.—Tanger ! (*Webb spec.*) ! (*Salzm. Exsicc.*) ! In monte Djebel Kebir ! Inter Tanger et Tetuan !

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia). Occurrit etiam rarissime in Gallia occidentali.

Characteres quibus *A. Fontanesii* (Boiss. et Reut. Pug. 108) ab *A. longa* distinguitur mihi videntur omnino fallaces (confer Duchartre, l. c. p. 487). Sistit varietatem perigonio (vel calyce) majore.

A. BÆTICA (*L., Duchartre in DC. Pr.* xv. pars 1, 490),=A. glauca (*Desf. Fl. Atl.* ii. 324, tab. 250).

Mar. sept.—Tanger ! Tetuan (*Webb Herb.*) !

Mar. occid.—Mogador (*Lowe spec. in Herb. Kew.*) ! Agadir (*Coll. Indig.* 1871) !

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

CYTINEÆ (*A. Brogn. in Ann. Sc. Nat.* i. 29).

CYTINUS (*L. Gen.* 1232).

C. HYPOCISTIS (*L. Gen.* 1232).

Mar. sept.—In monte Djebel Kebir prope Tanger in radicibus *Cistorum* !

Mar. merid.—Taradut (*R. et Fr. spec. in Herb. Kew.*) !

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia). Spec. ex Asia Mediterranea continentali non vidi.

EUPHORBIACEÆ (*R. Br. in Flind. Voy., Rem.* 23).

EUPHORBIA (*L. Gen.* 609).

E. PEPLIS (*L., DC. Pr.* xv. pars 2, 27).

Mar. sept.—Tanger, folia visa ! (*spec. ex Herb. Schousboe comm. Coss.*) !

Mar. occid.—Mazagan !

Ar. Geog. Species in litoribus fere omnibus arenosis regionis Mediterraneæ et Europæ occidentalis obvia.

E. CHAMÆSYCE (*L., Boiss. in DC. Pr.* xv. pars 2, 34).

Mar. occid.—Mazagan !

—— ——, var. CANESCENS (*Boiss. l. c.*),=E. canescens (*L., Cavan. Icon.* tab. 63),=E. massiliensis (*Salzm. Exsicc.*)
Mar. sept.—Tanger (*Salzm. Exsicc.*)!
Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).
Varietas *canescens* in typum formis intermediis transit.

EUPHORBIA AKENOCARPA (*Guss. Cat. Hort. Boccadif., et Prod. Fl. Sicc.* i. 540; *Boiss. in DC. Pr.* xv. pars 2, 119),=E. sphærococca (*Salzm. Exsicc.*).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)!
Ar. Geog. Hispania australis. Ager Tingitanus. Italia meridionalis.

E. RUPICOLA (*Boiss. Elench.* No. 174, *Voy. Esp.* 566, tab. 161, *et in DC. Pr.* xv. pars 2, 131),=L. diffusa (*L. Duf. in Bull. Soc. Bot. Fr.* viii. 445),=E. dumetorum (*Coss. et Dur. in Balansa Pl. d'Algérie, ex Boiss. l. c.*),=E. squamigera (*Lois. Fl. Gall.* i. 345).
Mar. sept.—Prope Tanger! et prope Tetuan! legi floriferam nondum fructiferam. Frustulum ex Herb. Webb. in monte Djebel Dersa prope Tetuan lectum certe huc referendum!
Ar. Geog. Rarius occurrit in Hispania australi (ad Gibraltar, ubi ipse legi) et alibi, et in Algarbiis et in Africa boreali-occidentali. Semel lecta prope Telonem "casu aliquo adventitia" ex Boiss. l. c. Nomen Loiseleurianum omnino improprium et negligendum.
Cel. J. D. Hooker specimen nimis immaturum prope Casa Blanca legit *E. rupicolæ* affine, sed vix huic referendum. Planta ulterius inquirenda.

E. PUBESCENS (*Vahl, Symb.* ii. 55; *Boiss. in DC. Pr.* xv. pars 2, 134).
Mar. sept.—Frequens in humidis et umbrosis. Tanger! Cap. Spartel! Ad lacum salsum (*G. Maw*)! Tetuan (1851)!
Mar. occid.—Mogador (*Lowe Cat.*).
Mar. merid.—Prov. Shedma! In irrigatis urbis Marocco! Amsmiz!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

E. PTEROCOCCA (*Brot. Fl. Lus.* ii. 312; *Boiss. in DC. Pr.* xv. pars 2, 136).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Cap. Spartel! Inter Tanger et Tetuan!
Ar. Geog. Per regionem Mediterraneam calidiorem imprimis occidentalem (ex insula Zacyntho usque Macaronesiam) dispersa, sed infrequens. Deest in Gallia et in Italia continentali.

E. HELIOSCOPIA (*L., DC. Pr.* xv. pars 2, 136).
Mar. sept.—Tanger! Cap. Spartel! Tetuan
Mar. merid.—Videtur rara. Specimen unicum in ditione Mesfioua legit J. D. H.!
Ar. Geog. Europa omnis a Lapponia usque fretum Herculis et Bos-

phorum. Asia media usque Japoniam. In regione Mediterranea fere omni, sed forsan in calidioribus introducta. In montibus Himalaya. Cum seminibus in America boreali, Africa australi et alibi introducta.

EUPHORBIA EXIGUA (*L., DC. Pr.* xv. pars 2, 139).

Mar. sept.—Frequens in dit. Tingitana necnon in Tetuanensi, sed, ut videtur, omnino deficiens in provinciis meridionalibus. Tanger! (*Webb Herb.*)! Cap. Spartel! Inter Tanger et Tetuan! Tetuan (1851)!

Ar. Geog. Regio omnis Mediterranea. Europa media. Suecia australis.

E. INCONSPICUA (*Ball in Journ. Bot.* 1875, 204).

Herbacea, nana, erectiuscula; caulis subsimplex, vel e basi ramosus; umbella pauci- (2–3-)radiata; folia omnia breviter petiolata, inferiora late cuneato-obcordata, basi truncata, apice mucronata, utrinque denticulata, sinu lato emarginata, superiora sensim angustiora, demum oblongo-linearia, acuta vel sæpius apice emarginata tridentata, floralia conformia; glandularum cornua longiuscula; capsula longiuscule pedicellata, lævis, trisulcata; styli tantum ima basi coaliti, divergentes; semina tuberculis acutis exasperata; caruncula substipitata, agariciformis.

Mar. merid.—Legimus prope Ourika! et spec. unicum prope Seksaoua!

Specimina fructifera ex oasi Akka ad meridiem urbis Tarudant ab indigeno Mardochæo lecta sub "*E. glebulosa*, Coss. et Dur.," benevole communicavit cel. Cosson!

E. glebulosæ (Coss. et Dur. in Bull. Soc. Bot. Fr. iv. 493) vel (forsan errore typographi) *E. globulosæ* (Boiss. in DC. Pr. xv. pars 2, 139) nostra planta proxime affinis est, et post eam forsan sicut subspecies enumeranda, differt tamen notis haud levibus. *E. glebulosa* gaudet enim umbella 3–5-radiata, foliis inferioribus angustis, superioribus latioribus ovato-rhombeis, capsula brevissime nec longiuscule pedicellata. Semina in specim. Algeriensibus *E. glebulosæ* ego vidi semper minute tuberculata, multo minus aspera quam in planta nostra; hæc nota tamen, monente cel. Cosson, variabilis est.

Radix in *E. glebulosa* interdum perennans.

E. FALCATA (*L., Boiss. in DC. Pr.* xv. pars 2, 140).

Mar. occid.—In prov. Haha prope Mogador! In monte Djebel Hadid haud procul Mogador!

Mar. merid.—In prov. Shedma! Mesfioua!

—— ——, var. **RUBRA**, *Boiss. l. c.*,=E. rubra (*Cavan. Icon.* i. tab. 34).

Mar. occid.—Casa Blanca!

Mar. merid.—Seksaoua!

Ut jam monuit cel. Boissier, hæc est potius lusus quam vera varietas.

Ar. Geog. Regio Mediterranea omnis (exclusa Macaronesia). Hinc inde occurrit in calidioribus Europæ mediæ et in India boreali-occidentali.

EUPHORBIA PEPLUS (*L., Boiss. in DC. Pr.* xv. pars 2, 141).
Mar. sept.—Tetuan (1851)!
Mar. merid.—In ruderatis urbis Marocco!
Ar. Geog. Europa omnis (exclusa arctica). Regio omnis Mediterranea (inclusa Macaronesia). In America boreali et in Africa australi introducta.

E. peploides (*Gouan, Fl. Monsp.* 174; *Boiss. in DC. Pr.* xv. pars 2, 141).
Mar. merid.—Misra ben Kara! legi etiam ad Gibraltar et prope Algeciras.
Valde proxima præcedenti et sicut subspecies enumeranda.
Ar. Geog. Per regionem Mediterraneam hinc inde occurrit. Ex Macaronesia non vidi.

E. MEDICAGINEA (*Boiss. Elench.* No. 176, *Voy. Esp.* 569, tab. 162, *et in DC. Pr.* xv. pars 2, 144),=E. italica (*Salzm. Exsicc. Tingit., non Lam.*),=E. latifolia (*Salzm. Exsicc. Malacitana, non C. A. M.*).
Mar. sept.—Satis frequens in ditione Tingitana. Tanger! (*Salzm. Exsicc.*)! Inter Tanger et Tetuan! Tetuan (1851)! Inter Tetuan et Ceuta!
—— ——, var. OBLONGIFOLIA. Folia caulina lineari-oblonga vel oblongo-ovalia, apice truncata, sinu lato emarginata.
Mar. merid.—Legi in provincia Shedma prope castellum præfecti
Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

E. PINEA (*L., Boiss. in DC. Pr.* xv. pars 2, 145).
Mar. merid.—Ad radices Atlantis Majoris supra Milhaïn!
Ar. Geog. Species in maritimis regionis Mediterraneæ late diffusa. In Madera indicata, deest, ut videtur, in ins. Canariensibus.
E. pineæ proxime affines sunt *E. segetalis*, L., regionis Mediterraneæ occidentalis et Europæ centralis civis, et *E. Portlandica* in maritimis Atlanticis Europæ ex Hibernia et Scotia usque Lusitaniam obvia.
Specimina nostra prope Milhaïn lecta, fere media inter *E. pineam* et *E. segetalem*, priori adduxi, dum radix perennis, vel potius perennans. Planta enim floret anno primo et ex radice interdum (nec semper) perennante nascitur caulis florifer anno sequente. *E. pinea*, ut mihi videtur, est var. maritima perennans *E. segetalis*, et ab hac sententia cel. Boissier non alienus foret. *E. Portlandica*, pace viri celeb., ab *E. segetali* longius distat radice perenni longævo, caulibus numerosis diffusis, et forma foliorum, et meo sensu subspeciem sistit. Tam *E. pinea* quam *E. segetalis* in insula Madera inveniuntur, quod facile credendum si has pro formis unius ejusdemque speciei agnoscimus.

E. MEGALATLANTICA (*Ball in Journ. Bot.* 1875, 205).
Descriptio ex spec. unico manco :—Perennis (?) e basi ramosus (?) ramis adscendentibus; folia sessilia, integerrima, obverse lanceolata, apice mucronata, reflexa (in spec. nost.); umbella 5-radiata, radiis bis bifidis;

folia floralia rhombeo-orbicularia; cornua glandularum involucri ipsarum latitudinem subæquantia, subclavata; capsula longiuscule pedicellata, in coccæ dorso papilloso-verrucosa; styli longiusculi, subcoaliti, vix apice furcati; semina nigra, tuberculis minutis in lineas longitudinales dispositis asperula. Pluribus notis inter *E. segetalem* et *E. nicæensem* media, ab utraque capsula, seminibus, cæterisque notis diversa. Forsan propior erit *E. cerebrina*, Hochst., mihi ex descript. tantum cognita, sed in hac glandulæ et semina omnino diversa.

Mar. merid.—Ad radices Atlantis Majoris prope Ourika!

Euphorbia rimarum (*Coss. in Bull. Soc. Bot. Fr.* xx. 261).

Sequitur descriptio Cossoniana:—"Planta *perennis*, pumila, pallide virens, caudice verticali in radicem fusiformem abeunte. *Caules* numerosi, tenues, *inferne suffruticosi* superne herbacei, basi ramosi, superne simplices vel parce ramosi, diffusi vel ascendentes, puberuli vel glabri. *Folia* minuta, oblongo-obovata vel suborbiculata, *integra*, apice obtusa vel subretusa mucronata, glabra vel puberula, *breviter petiolata*, patula, *floralia subconformia* latiora interdum basi truncata. *Umbellæ sæpius triradiatæ*, radiis longiusculis simplicibus vel bifidis. *Involucri* turbinati lobi ovati emarginati denticulato-ciliati, *glandulæ* transverse oblongæ truncatæ *cornutæ cornibus tenuibus* glandulæ latitudini subæquilongis parallelis. *Capsula oblonga*, trisulcata, *coccis lævibus dorso* subcarinatis *non alatis*, stylis ima basi tantum coalitis. *Semina* oblongo-obovata subtrigona, nigrescentia, *undique et crebre tuberculato-globulosa* tuberculis primum albidis, caruncula brevi obconico-subglobosa."

Mar. merid.—Occurrit frequentissime in rupibus præsertim in regione inferiore Atlantis Majoris a 500 m. usque 1600 m. s. m. Primus legit Balansa anno 1867 in provincia Haha et in rupibus prope Moulaï Ibrahim. Legimus in convalle Aït Mesan! in convalle Amsmiz! supra Seksaoua! Milhaïn! et prope Mskala ad fines prov. Shedma!

Species affines, scil. *E. herniariæfolia*, Willd., *E. deflexa*, Sibth. et Sm., *E. kanaorica*, Boiss., *E. bounophila*, Boiss., et *E. caudiculosa*, Boiss., gaudent omnes seminibus varie foveolatis et insculptis, nec, ut in *E. rimarum*, tuberculatis. Hæ omnes sunt species alpinæ, dum *E. rimarum* est planta rupestris regionis calidioris incola.

E. terracina (*L., Boiss. in DC. Pr.* xv. pars 2, 157),=E. heterophylla (*Desf. Fl. Atl.* i. 382, tab. 102),=E. seticornis (*Poir. Voy.* ii. 173),=E. leiosperma (*Sibth. et Sm. Fl. Gr.* v. 51, tab. 465),=E. purpurascens (*Salzm. Exsicc. Tingit.*),=E. leiosperma (*Salzm. Exsicc. Tingit.*), forma ab *E. leiosperma*, Fl. Gr. diversa,=E. verna (*Salzm. Exsicc. Malacitana*).

Synonyma alia quindecim a cel. Boissier l. c. citata prætermisi. Species proteiformis in omni territorio Maroccano nobis noto frequens, præsertim in zona litorali.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Cap. Spartel! Tetuan! (1851 et 1871)! Inter Tanger et Tetuan! Inter Tetuan et Ceuta

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*). In monte Djebel Hadid! et juxta Aïn el Hadjar haud procul Mogador! Agadir (*Coll. Indig.* 1871)!

Mar. merid.—Mzouda! In prov. Haha! Prope urbem Marocco (*R. et Fr. spec. in Herb. Kew.*)! Pluries visa locis non notatis.

Inter cæteras formas a nobis lectas adsunt spec. foliis crebris lineari-lanceolatis a forma typica valde diversa. Adsunt tamen tot tantæque formæ intermediæ ut varietates distinctæ vix enumerandæ videntur.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

EUPHORBIA PARALIAS (*L., Boiss. in DC. Pr.* xv. pars 2, 167).

Mar. sept.—Vidi nondum florentem prope Tanger!

Mar. occid.—Mogador! vidi etiam in maritimis prope Saffi!

Ar. Geog. In litoribus marinis totius regionis Mediterraneæ, necnon Europæ occidentalis ab Anglia et Hibernia usque Lusitaniam.

E. CHARACIAS (*L., Boiss. in DC. Pr.* xv. pars 2, 172).

Mar. sept.—In monte Beni Hosmar!

Ar. Geog. Europa austro-occidentalis a Sicilia usque Lusitaniam. Marocco septentrionalis. Occurrit etiam in insula Creta.

Euphorbias cactoideas Maroccanas eximie tractavit cel. Cosson (in Bull. Soc. Bot. Fr. xxi. pp. 162 et seq.). Annuente cel. auctore descriptiones et observationes infra transcripsi, verbo nullo mutato nisi locis natalibus nonnullis additis vel emendatis.

" *De Euphorbiis cactoideis Maroccanis.*

" EUPHORBIA sect. DIACANTHIUM (quoad species Maroccanas).

"*Plantæ* perennes, habitu *Cactum referentes,* inferne *indurato-frutescentes* cortice cinereo, *ramis carnosis* 3- *polygonis* virenti-subglaucescentibus angulis haud undulato-lobatis. *Spinæ stipulares* 2, breves vel elongatæ, *inferne in scutellum confluentes* scutellis in angulis caulis decurrentibus vel non decurrentibus. *Folia ad tuberculum minutum* cum scutello confluens et *demum obsoletum reducta. Puncta depressa* (puncta gemmipara) *massula cellulosa,* gemmam ramealem vel floriferam emissura *repleta,* ad scutellum sita vel ab illo plus minus remota. Involucra saltem lateralia bracteis binis oppositis suffulta. Bracteolæ inter flores masculos fimbriatæ vel laceræ, sæpe basi connatæ. Glandulæ carnosæ. Capsulæ pericarpium crassum induratum. *Semen* subglobosum, *ecarunculatum.*

"E. RESINIFERA (*Berg. in Berg. et C.-F. Schmidt, Offiz. Gewächse,* t. 34 *d, f, m–x*; *Coss. in Bull. Soc. Roy. Belg.* x. 5–12, descriptio manca),=E. officinarum (*Jackson, Acc. Marocc.* ed. 3, p. 134, ex parte, t. 6. fig. sinistra).

"*Planta a basi ramosa,* a 25 centim. ad 1 metr. et ultra alta. *Caules* parce ramosi, *tetragoni*, rarius trigoni, *faciebus subconcavis*, angulis obtusis. *Spinæ stipulares breves*, patentes, inferne *in scutellum subtriangulari-ovatum confluentes, scutellis* remotiusculis in angulis caulis *non decurrentibus. Puncta gemmipara* paulo *infra medium spatii interstipularis sita.* Cymæ pedunculatæ, pedunculo crasso ramis cymæ subæquilongo, sæpius 3-floræ, involucro calyciformi medio subsessili, lateralibus pedunculatis. Involucrum calyciforme campanulato-cyathiforme *glandulis carnosis majusculis* transverse oblongo-subrhombeis vel late obovato-cuneatis, *aureo-flavis. Capsula* majuscula, *depressa profunde tricocca, coccis* lævibus *a latere compressis* sed valde convexis dorso *acute carinatis.* Semen subpapillosum.

"*E. resinifera* inter omnes species sectionis *Diacanthium* scutellis haud confluentibus donatas caulibus tri- vel tetragonis insignis."

Mar. merid.—Ad radices Atlantis Majoris ad austro-orientem urbis Marocco. In ditione Mesfioua vidimus plantam vivam ex collinis vicinis in hortum allatam! Plantam in provincia Demenet satis frequentem ab indigenis usque Mogador allatam in Angliam misit b. Carstensen, et serius spec. altera in Horto Kewensi culta ex montosis prov. Ntifa obtinuit. Specimina in Horto Parisiensi culta ex Ouanyna in ditione Mesfioua attulit indigenus Ibrahim aspice b. Beaumier.

EUPHORBIA BEAUMIERANA (*Hook. f. et Coss. ap. Coss. in Bull. Soc. Bot.* xix. 59 sine descriptione), = E. officinarum (*Jackson, Acc. Marocc.* ed. 3, p. 134, ex parte, t. 6. fig. dextra), = E. officinarum (*Boiss. in DC. Pr.* xv. pars 2, 84, ex parte).

"Planta a 25 centim. ad 2 metr. alta. *Caulis primarius* oblongo-obovatus *demum superne valde incrassatus* obpiriformis *in longitudinem non excrescens ibique ramos* numerosos inæquales *ipsum longissime superantes emittens. Rami* sæpius 9–10*goni, sinibus inter costas profundis. Spinæ stipulares breves* patentes *haud deflexæ*, inferne in scutellum oblongo-lineare confluentes, *scutellis linealiter in costa decurrentibus. Puncta gemmipara ad quintam partem inferiorem spatii interstipularis sita.* Cymæ, flores et fructus ignoti. *Involucri glandulæ intense rubræ* (sec. Jackson)."

Mar. merid.—In regione litorali ad meridiem urbis Mogador usque ad Oued Noun; in provinciis Haha et Agadir (*Jackson*); specimina viva in regione litorali inter Mogador et Agadir lecta attulerunt indigeni mense Junio 1871, hodie in Hort. Kew. culta; ad Agadir, ubi montes contegit et sæpe specimina maxima occurrunt, mulio Ibrahim sub auspiciis cl. Beaumier legit, unde specimina in Horto Parisiensi culta; in ditione Ksima inter Agadir et Oued Noun legit rabbinus Mardochée.

"*E. Beaumierana* valde affinis *E. officinarum*, sed distincta videtur spinis stipularibus non deflexis, glandulis involucri intense rubris (sec. Jackson) non flavidis. Forsan sub *E. officinarum* auctorum species plures adhuc confusæ.

"Subvar. *fasciata.*—Rami omnes vel plerique fasciati in cristas crassas contortas expansi spinis stipularibus abortivis brevissimis vel evanidis.

"Hinc inde cum planta normali in ditione Ksima inter Agadir et Oued Noun (rabbinus Mardochée, 1874)."

EUPHORBIA ECHINUS, (*Hook. f. et Coss. in Bull. Soc. Bot. Fr.* xxi. 164).

"*Planta sæpius* 7–30 *centim. alta. Caulis primarius superne ramis conformis in longitudinem excrescens, infra apicem ramos numerosos subcorymbosos ipsi subæquilongos vel breviores emittens. Rami sæpius* 6*goni, sinibus inter costas latiusculis parum profundis. Spinæ stipulares elongatæ validæ* patentes *haud deflexæ,* inferne in scutellum oblongo-lineare confluentes, *scutellis linealiter in costa decurrentibus Puncta gemmipara scutello contigua.* Cymæ pedunculatæ, pedunculo ramis cymæ subæquilongo, 4–5- rarius 3-floræ, involucro calyciformi medio subsessili masculo, cito deciduo, lateralibus pedunculatis hermaphroditis. Involucrum calyciforme campanulato-cyathiforme, *glandulis carnosis minusculis* transverse oblongo-subrhombeis, statu sicco vinoso-purpureis, lobis membranaceis suborbiculatis longe exsertis. *Capsula parvula, subgloboso-tricocca, coccis* lævibus *a latere vix compressis* dorso carinatis. Semen irregulariter rugulosum."

Mar. merid.—In regno Maroccano australiore haud procul a litore: ad Tazeroualt rabbinus Mardochée invenit, et inde specimina Horto Parisiensi a cl. Beaumier missa; in ditione Ba-Ahmran rabbinus Mardochée Augusto 1873 floriferam et fructiferam legit.

"*E. Echinus* ab *E. Beaumierana* differt caule sæpius hexagono, spinis stipularibus longioribus et præsertim modo crescendi.

"Var. *brevispina.* Spinæ stipulares breves."

Vir oculatus Jackson, etiamsi rei botanices inexpertus, differentias inter *E. resiniferam* et *E. Beaumieranam* olim observavit et indicavit. Opus Jacksonianum tamen scriptoribus botanicis vix cognitum.

ANDRACHNE (*L. Gen.* 973).

A. MAROCCANA (*Ball in Journ. Bot.* 1875, 205).

E collo radicis lignosæ ramosissima, rami tenues, sæpius indivisi, striati, 6–15-pollicares, e basi foliacei; folia anguste lanceolata, breviter petiolata, nitida, viridia, apice cartilagineo mucronata; flores omnes solitarii, masculi minimi, versus apicem ramorum conferti, breviter pedicellati, calycis segmentis membranaceis vix nervosis, late ovatis, subacutis, petalis lineari-cuneatis apice bilobis calyce dimidio brevioribus, disci glandulis (squamis N. ab E.) usque ad basin bipartitis, petalis dimidio brevioribus, filamentis monadelphis; flores fœminei segmentis calycinis foliaceis lanceolatis, acutis, dorso carinatis, carina in pedicello superne incrassato foliis demum æquilongo decurrente, petalis minimis oblongo-cuneatis, apice dentatis, glandulis disci usque ad basin bipartitis petalis subduplo longioribus; semina fusco-atra, superficie granulata aspera.

Mar. occid.—In monte Djebel Hadid haud procul Mogador!

Mar. merid.—In rupibus supra Seksaoua! et supra Milhaïn!

Primo intuitu ab *A. telephioide* differt foliis multo angustioribus, viridibus, nec glaucescentibus, petalis in flore masculo apice bilobis, nec lanceolatis integris, calyce et pedicello fl. fœminei fere duplo longioribus, petalis apice dentatis, nec nullis vel minutissimis integris, glandulis disci ter majoribus.

In N. ab E. 'Genera Fl. German.' glandulæ disci petalis alternæ ostenduntur, sed re vera sepalis alternæ et petalis oppositæ sunt.

MERCURIALIS (*L. Gen.* 1125).

M. ANNUA (*L., DC. Pr.* xv. pars 2, 797).

Mar. sept.—Tanger! Tetuan! Inter Tetuan et Ceuta!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Amsmiz! Seksaoua!

—— ——, var. AMBIGUA (*Duby, Bot. Gall.* i. 417),=L. ambigua, *L.*

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. merid.—In ruderatis urbis Marocco! Mzouda!

—— ——, var. SERRATIFOLIA, foliis profunde et acute serratis.

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Ar. Geog. Regio omnis Mediterranea. In Europa media occurrit passim in ruderatis et cultis, sed verisimiliter olim introducta.

RICINUS (*L. Gen.* 503, *ed. Schreb.* 1464).

R. COMMUNIS (*L., Müll. Arg. in DC. Pr.* xv. pars 2, 1817).

Mar. sept.—Tanger!

Mar. occid.—Mogador (*Lowe Cat.*).

Cl. Müller Argoviensis *Ricinos* omnes ad unam speciem reduxit, et quoad species sic dict. Mediterraneas libenter assentio. Planta verisimiliter ex Africa tropica orta, olim culta in regione Mediterranea (non indigena), valde variabilis est. Formas e cultura enatas vel subspontaneas botanici perperam sicut species distinctas enumerarunt.

URTICACEÆ (*Endl. Prod. Norf.* 37).

URTICA (*L. Gen.* 1054).

U. URENS (*L., Wedd. in DC. Pr.* xvi. pars 1, 40).

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. In temperatis orbis veteris latissime diffusa, rarior in tropicis et subtropicis. In Americam introducta, ibi hodie spontanea.

U. PILULIFERA (*L., Wedd. in DC. Pr.* xvi. pars 1, 48).

Mar. sept.—Certe visa pr. Tanger, sed spec. non conservata!

Mar. merid.—In ruderatis urbis Marocco visa!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). In Europa media satis frequens sed verisimiliter introducta. Indicatur in Asia tropica et in insula Sanctæ Helenæ.

URTICA DIOICA (*L.*, *Wedd. in DC. Pr.* xvi. pars 1, 50), var. PROCERA (*Wedd. l. c.* 52), = U. gracilis (*Ait. Hort. Kew.* iii. 341), sec. Weddell l. c.; sed planta Aitoniana ex America subarctica juxta sinum Hudson orta est.

Mar. merid.—In irrigatis urbis Marocco!

Ar. Geog. Species in temperatis imprimis frigidioribus Europæ et Asiæ vulgatissima, in calidioribus regionis Mediterraneæ infrequens, nec in Macaronesia indicatur. In America fere tota diffusa, dicitur introducta sed occurrunt varietates plurimæ etiam in regione montana Americæ centralis et australis. Var. *procera* in America boreali et in Algeria obvia est.

U. MEMBRANACEA (*Poir. Dict.* iv. 638; *Wedd. in DC. Pr.* xvi. pars 1, 56).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. occid.—Juxta Mazagan visa! In insula Mogador!

Ar. Geog. Regio Mediterranea imprimis occidentalis (inclusa Macaronesia), nec deest in insulis Azoricis. Ex Asia Mediterranea spec. nulla vidi. In Gallia occidentali (sec. Weddell l. c., deest tamen in Gren. et Godr.) verisimiliter introducta.

PARIETARIA (*L. Gen.* 1152).

P. OFFICINALIS (*L.*, *Wedd. in DC. Pr.* xvi. pars 1, 235 [42]).

Mar. sept.—Tanger! Cap. Spartel!

Mar. occid.—Mogador (*Lowe spec. in Herb. Kew.*)!

Specimina nostra sub var. *diffusa* (Wedd. l. c.), = *P. diffusa* (M. et K. Deutschl. Fl. i. 827) enumeranda—caules tamen sæpe suberecti.

Ar. Geog. Regio omnis Mediterranea. Europa omnis exclusa arctica.

P. MAURITANICA (*Durieu in Duchartre, Rev. Bot.* ii. 427; *Wedd. in DC. Pr.* xvi. pars 1, 235 [45]), var. DIFFUSA (*Wedd. l. c.*).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Mar. merid.—Prope Amsmiz!

Ar. Geog. Africa borealis. Peninsula Iberica. In monte Clarence Africæ æquatorialis.

FORSKOHLEA (*L. Amœn. Acad.* vii. 72).

F. TENACISSIMA (*L.*, *Wedd. in DC. Pr.* xvi. 235 [55]).

Mar. merid.—In collibus saxosis ab urbi Marocco septentrionem versus legit cl. G. Maw, et spec. communicavit! Prope urbem Marocco (*R. et Fr. spec. in Herb. Kew.*)!

Specimina nostra inter typum et *F. Cossonianam* (Webb, Otia Hisp. 49, tab. 44), a cl. Weddell optimo consilio ad varietatem reductam, fere media.

Ar. Geog. Species imprimis in regione subtropica desertorum ex India occidentali usque Algeriam interiorem diffusa; insuper in Marocco meridionali obvia. Var. *Cossoniana* unico loco in Hispania austro-occidentali hucusque detecta.

ULMACEÆ (*Mirb. Elém.* 905).

ULMUS (*L. Gen.* 316).

U. CAMPESTRIS (*Sm. Eng. Fl.* ii. 20; *Planch. in DC. Pr.* xvii. 156)?

Mar. sept.—Frustulum foliaceum prope El Araisch lectum attulerunt cll. Rein et Fritsch verisimiliter huc referendum. An sponte crescit?

Ar. Geog. Species valde ludibunda, imprimis per Europam et Asiam temperatam late diffusa. In regione tota Mediterranea hinc inde occurrit, interdum fruticeta in collibus incultis efformans, interdum arborea, plane introducta et culta.

CELTIS (*L. Gen.* 1143).

C. AUSTRALIS (*L., Planch. in DC. Pr.* xvii. 169).

Mar. sept.—Ad radices montis Beni Hosmar pr. Tetuan visa!

Mar. merid.—Sheshaoua! Grigory (*R. et Fr. spec. in Herb. Kew.*)! an eodem loco qui nobis Gurguri scribitur?

Ar. Geog. Regio fere omnis Mediterranea inclusa Madera sed exclusis insulis Canariensibus. Nascitur etiam in calidioribus Galliæ mediæ et Hungariæ australis.

CUPULIFERÆ (*Rich. Anal. Fr.* 33).

QUERCUS (*L. Gen.* 1070).

Q. HUMILIS (*Lam. Dict.* i. 719; *A. DC. in Prod.* xvi. pars 2, 16).

Mar. sept.—In monte Djebel Kebir pr. Tanger! (*Webb, ex A. DC. l. c.*). (*Salzm. Exsicc.* sub "*Q. lusitanica*")!

Ar. Geog. Peninsula Iberica. Africa Tingitana.

Q. LUSITANICA (*Lam. Dict.* i. 719; *Webb, It. Hisp.* 11; *A. DC. in Prod.* xvi. pars 2, 17).

Mar. sept.—In agro Tingitano vulgatissima (*Webb, l. c.*)! Djebel Kebir!

Ar. Geog. Peninsula Iberica. Africa Tingitana. Var. in Asia Mediterranea late diffusa.

Q. Mirbeckii (*Durieu in Duchartre, Rev. Bot.* ii. 426), = Q. lusitanica *subspecies* bætica (*A. DC. l. c.* 19), = Q. lusitanica, var. bætica *et* var. Salzmanniana (*Webb, It. Hisp.* 12).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir!

Ar. Geog. Peninsula Iberica. Africa borealis. Var. in Oriente.

Q. *infectoria* (Oliv. Voy. i. 252, tab. 14 et 15), planta orientalis cujus lusus vel varietates sunt species Kotschyanæ *Q. polycarpos*, *Q. brachycarpa*, *Q. Pfæffingeri*, et *Q. Cypri* necnon *Q. Boissieri* (Reut. in Boiss. Diagn. Pl. Or. ser. 1, xii. 119), est mere varietas *Q. lusitanicæ* a planta occidentali ægre distinguenda. *Q. Mirbeckii* sicut subspeciem enumeravi, forsan tamen pro varietate melius habenda.

QUERCUS ILEX (*L., A. DC. in Prod.* xvi. pars 2, 38).

Mar. merid.—Frequens in regione inferiore Atlantis Majoris, plerumque inter 1000 m. et 1500 m. s. m. Tasseremout! Ourika! Reraya! Amsmiz! pluries alibi visa!

—— ——, var. BALLOTA (*A. DC. l. c.*),=Q. Ballota (*Desf. Fl. Atl.* ii. 350; *Webb, It. Hisp. l. c.*).

Mar. sept.—In monte Djebel Dersa prope Tetuan (*Webb, l. c.*).

Mar. merid.—In monte Djebel Tezah a 2400 m. usque 2700 m. s. m.!

Arbores sparsæ sat magnæ reliquiæ ut videtur, sylvarum clivos Atlantis olim late vestientium, hodie incuria incolarum dirutarum.

Ar. Geog. *Q. Ilex* per regionem Mediterraneam (exclusa Macaronesia) late diffusa, occurrit etiam in Gallia occidentali. Var. *Ballota* peninsulam Ibericam et Africam borealem incolit.

Q. COCCIFERA (*L., A. DC. in Prod.* xvi. pars 2, 52).

Mar. sept.—In monte Djebel Kebir! Spec. ex herb. Schousboe benev. comm. cel. Cosson!

—— ——, var. IMBRICATA (*A. DC. loc. cit.*),=Q. pseudococcifera (*Webb, It. Hisp.* 15, *non Desf. Fl. Atl.* ii. 349, *sec. A. DC.*).

Mar. sept.—In monte Djebel Kebir prope Tanger (*Webb, l. c.*).

Huc verisimiliter spec. prope Tetuan in monte Djebel Dersa lectum (sec. A. DC. l. c.) a beato Webb ad *Q. pseudococciferam*, Labill., non Desf., relatum. Hæc novissima,=*Q. calliprinos* (Webb, It. Hisp. 15; A. DC. in Prod. xvi. pars 2, 54), est species regionis Mediterraneæ orientalis propria et haud facile in ditione nostra invenienda.

Ar. Geog. *Q. coccifera* regionem fere omnem Mediterraneam incolit, frequens in occidentalibus fit rarior orientem versus. Deest cum congeneribus (immo cum *Cupuliferis* omnibus) in Macaronesia. In provinciis Maroccanis meridionalibus hucusque non visa.

Quercus regionis Mediterraneæ omnes quam maxime ludibundæ a cel. A. DeCandolle in 'Prodromo' eximie tractatæ, adhuc studio diligente et diuturna observatione in vivo egent.

Vidimus prope Tanger et Tetuan *Castaneam vulgarem*, Lam., certe cultam. Spontaneam vel etiam subspontaneam in Imperio Maroccano nullibi vidimus.

SALICINEÆ (*Rich. Elém.* ed. 4, 560).

SALIX (*L. Gen.* 1098).

S. ALBA (*L., Anders. in DC. Pr.* xvi. pars 2, 211).

Mar. sept.—Tanger (*Webb Herb.*)!

Ar. Geog. In Europa et Asia temperata late diffusa et per totam aream regionis Mediterraneam (exclusa Macaronesia) dispersa. Sec. cl. Andersson l. c. ex Asia versus occidentem migrata.

SALIX CANARIENSIS (*Chr. Smith, sec. Webb, Phyt. Canar.* iii. 270, tab. 215; *Anders. in DC. Pr.* xvi. pars 2, 216)?

Mar. merid.—In convalle Ourika circ. 1100 m., sine flore et fructu et ideo prorsus incerta!

Spec. nostra ex ramis sterilibus desumpta Canariensibus omnino conformia sunt.

Ar. Geog. Species hucusque Macaronesiæ propria.

S. PEDICELLATA (*Desf. Fl. Atl.* ii. 362; *Anders. in DC. Pr.* xvi. pars 2, 216).

Mar. sept.—Legimus in monte Djebel Kebir! ex eodem loco habui spec. ex herb. Webb!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Calabria. Sicilia. Corsica.

S. PURPUREA (*L., Anders. in DC. Pr.* xvi. pars 2, 306), var. HELIX (*Anders. l. c.*),=S. Helix (*L., et auct. plurim.*).

Mar. merid.—In regione inferiore Atlantis Majoris. Ourika! Aït Mesan!

Ar. Geog. In temperatis Europæ et Asiæ late diffusa. In regione Mediterranea rarior, sed in tota area excepta Macaronesia dispersa.

POPULUS (*L. Gen.* 1123).

P. ALBA (*L., Wesmael in DC. Pr.* xvi. pars 2, 324).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—Prope Milhaïn! alibi pluries visa; arbor mediocris altitudinis 10–12 m., typo Europæo conformis.

—— ——, var. INTEGRIFOLIA, *nob.* Foliis ovato-orbicularibus, junioribus dentatis, demum subintegerrimis leviter angulato-sinuatis.

Mar. merid.—Crescit copiose in convalle Aït Mesan usque 1400 m. s. m. fructifera lecta! Hujus forma foliis minimis late ovatis acutiusculis, sine flore et fructu in convalle Ourika lecta! Arbor parva 5–7 m., ulteriore observatione egens.

Ar. Geog. Planta in temperatis præsertim calidioribus Europæ, Asiæ et Africæ borealis late diffusa. Deest in Macaronesia.

P. NIGRA (*L., Wesmael in DC. Pr.* xvi. pars 2, 327).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan! Prope Ourika!

Ar. Geog. Europa et Asia temperata. Var. in America boreali. Præter nostra spec. Africana non vidi.

Specimina nostra flore et fructu carentia haud omnino certa, sed vix ad aliam speciem referenda.

CERATOPHYLLEÆ (*Gray, Arr. Br. Pl.* ii. 534).

CERATOPHYLLUM (*L. Gen.* 1055).

C. DEMERSUM (*L., DC. Pr.* iii. 73).

Mar. merid.—In urbe Marocco vidimus subexsiccatum in fasciculo ex prov. Demenet allato et frustula servavimus!

Ar. Geog. Per Europam fere omnem et regionem Mediterraneam late diffusa. In Macaronesia nondum detecta.

GNETACEÆ (*Blume, Nov. Fam. Expos.* 23).

EPHEDRA (*L. Gen.* 1136).

E. ALTISSIMA (*Desf. Fl. Atl.* ii. 371, tab. 253; *Parl. in DC. Pr.* xvi. pars 2, 356), est verisimiliter *E. fragilis* (Lowe Cat., non Desf.).

Mar. occid.—In dumetis et fruticetis prov. Haha prope Mogador! Mogador (*Lowe Cat.*, sub *E. fragili*)?

Mar. merid.—Satis frequens in regione inferiore. Vidimus in prov. Haha! Shedma! Legimus juxta Sheshaoua! Tasseremout! In convalle Aït Mesan usque 1500 m.!

—— ——, var. NANA? Planta humilis subbipedalis ramis intricatis.

Mar. merid.—In saxosis aridis supra Milhaïn!

Spec. nostra flore et fructu carentia nimis incerta, sed ex modo crescendi *E. altissimæ* proxime affinia.

Planta in regione inferiore alte et late scandens ramis 4–5 metra longis.

Ar. Geog. Africa borealis ex Alexandria usque Mogador. Hispania. Ins. Canarienses.

E. PROCERA (*Fisch. et Mey. Ind. Sem.* 1844, 45; *Parl. in DC. Pr.* xvi. pars 2, 358), = E. græca (*C. A. M. Ephedr.* 93, tab. 5; *Coss. Index Pl. Mar.* 17).

Mar. merid.—Legi sine fl. et fr. in convalle Aït Mesan circ. 1400 m.! Spec. ex montibus Djebel Ouensa et Djebel Afougueur ab indigeno Ibrahim lecta benevole comm. cel. Cosson!

Ar. Geog. Regio Mediterranea orientalis. Marocco. Ex Algeria non vidi.

CONIFERÆ (*Juss. Gen.* 411).

PINUS (*L. Gen.* 1077).

P. HALEPENSIS (*Mill. Dict.* No. 8, tab. 216; *Parl. in DC. Pr.* xvi. pars 2, 383).

Mar. merid.—In Atlante Majore, ut videtur, rara. Legimus in convalle Amsmiz a 1300 m. usque 1700 m.!

Arbores sparsæ mediocri magnitudine.

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

PINUS CEDRUS (*L., Parl. in DC. Pr.* xvi. pars 2, 407), var. ATLANTICA (*Parl. l. c.*),=P. atlantica (*Endl. Conif.* 137),=Cedrus atlantica (*Manetti, Cat. Hort. Madoet. Suppl.* 8, *ex Parl. l. c.*).

Mar. sept.—Ex montibus ditionis Riff ab urbe Tetuan meridiem versus indigena quidam attulit et beato Webb dedit. Frustulum ex herb. Webb in herb. nostro!

Mar. centr.—? Verisimiliter in montibus ab urbe Fez ad austro-orientem, a Gerhard Rohlfs viatore indefesso sed rei botanices inexperto, pro *Larice* indicata.

Ar. Geog. Species in montibus Asiæ Mediterraneæ, et in montibus Himalaya. Var. *atlantica* in Atlante Minore.

CALLITRIS (*Vent. Decad.*)

C. QUADRIVALVIS (*Vent. Decad.* p. 10; *Parl. in DC. Pr.* xvi. pars 2, 452),=Thuja articulata (*Vahl, Symb.* ii. 96; *Desf. Fl. Atl.* ii. 352, tab. 252).

Mar. sept.—Prope Tetuan (1851)! (*Webb Herb.*)!

Mar. occid.—Prope Mogador, præsertim versus montem Djebel Hadid! (*Lowe Cat.*).

Mar. merid.—In regione inferiore Atlantis Majoris satis frequens, sed non ubique. Ourika! Seksaoua! et alibi visa.

Ar. Geog. Africa borealis.

Arbor mediocris 5–10 m. alta, indigenis *Arar* dicto, lignum pretiosum, et resinam *sandraccam* præbens, incuria indigenarum sæpe cruta vel igne consumpta, adeo ut rarius truncos ultra 30 centim. diametro invenies.

JUNIPERUS (*L. Gen.* 1134).

J. OXYCEDRUS (*L., Parl. in DC. Pr.* xvi. pars 2, 477).

Mar. merid.—Satis frequens, præsertim ad radices Atlantis Majoris. Amsmiz! Tasseremout! In convalle Aït Mesan usque 1800 m.!

Ar. Geog. Regio fere omnis Mediterranea (inclusa Madera, exclusis tamen ins. Canariensibus).

J. macrocarpa (*Sibth. et Sm. Prod. Fl. Gr.* ii. 263; *Parl. in DC. Pr.* xvi. pars 2, 476).

Mar. sept.—Vidi pr. Tanger! et spec. ex herb. Schousboe benev. comm. Cosson!

Mar. merid.—Legi in convalle Ourika formam huic et *P. Oxycedro* fere intermediam!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

Stirps *J. Oxycedro* nimis proxima—pro subspecie enumerata, sed forsan melius pro varietate habenda.

J. PHŒNICEA (*L., Parl. in DC. Pr.* xvi. pars 2, 486).

Mar. sept.—Inter Tetuan et Ceuta!

Mar. occid.—Rabat (*spec. in Herb. Webb*)! Mogador! Agadir (*Coll. Indig.* 1871)! In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—In regione inferiore Atlantis Majoris. Ourika! In convalle Aït Mesan! supra Amsmiz circ. 1300 m. s. m.!

In Atlante interdum fit arbor sat magna truncum usque 60 centim. diametro attingens. In planta juniore folia omnia sæpius libera.

—— ——, var. GALBULIS MOLLIBUS,=J. lycia, *L.*

Mar. merid.—Tasseremout! In convalle Aït Mesan usque 1500 m.!

Sec. Parlatore l. c. galbuli immaturi in *J. phœnicea* duri, maturi semper molles. Ego vidi in forma vulgari galbulos etiam omnino maturos duros, et formam galbulis mollibus sicut varietatem enumeravi.

Ar. Geog. Species per regionem omnem Mediterraneam (inclusa Macaronesia) late diffusa. Sæpius occurrit in zona litorali ubi fruticem 4–8-pedalem efficit. In Atlante et in montibus ins. Canariensium fit arbor mediocris 30-pedalis.

JUNIPERUS THURIFERA (*L., Parl. in DC. Pr.* xvi. pars 2, 487).

Mar. merid.—In convalle Aït Mesan et in ascensu jugi Tagherot a 2400 m. ad 2900 m.! Arbores solitariæ truncum diametro usque 70 centim. attingentes zonam latam in clivo montium altissimarum effingunt, reliquiæ ut videtur sylvarum hominum malitia et cœli intemperie devastatarum.

Ar. Geog. Species in peninsula Iberica et in Africa boreali-occidentali sat rara.

ORCHIDEÆ (*Juss. Gen.* 64).

ORCHIS (*L. Gen.* 1009).

O. PAPILIONACEA (*L., Rchb. Icon.* xiii. tab. 40).

Mar. sept.—Inter Fondak et Tetuan!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

O. LONGICRURIS (*Link, in Schrad. Journ.* ii. 323; *Rchb. Icon.* xiii. tab. 23),=O. undulatifolia (*Biv. Bern. Cent.* ii. 44, tab. 6),=O. tephrosanthos (*Desf. Fl. Atl.* ii. 319, *non Vill.*),=O. militaris (*Poir., non L.*).

Mar. sept.—In monte Beni Hosmar prope Tetuan! (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea calidior (exclusa Macaronesia).

O. TRIDENTATA (*Scop. Fl. Carn.* ed. 2, ii. 190), var. ACUMINATA (*Rchb. fil. in Icon.* xiii. tab. 18),=O. acuminata (*Desf. Fl. Atl.* ii. 318),=O. lactea (*Poir.*),=O. globosa (*Brot. non L.*).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Ar. Geog. Species in Europa media et australi. Var. *acuminata* in regione Mediterranea imprimis occidentali (exclusa Macaronesia).

ORCHIS MASCULA (*L., Rchb. Icon.* xiii. tab. 38).

Mar. sept.—In monte Beni Hosmar pr. Tetuan! (*Webb spec.*)!

Folia observavit cel. Webb maculata; in sp. nostris immaculata sunt.

Ar. Geog. Europa omnis temperata. Regio Mediterranea fere omnis (exclusa Macaronesia).

O. LATIFOLIA (*L., Rchb. Icon.* xiii. tab. 50 et 51).

Mar. merid.—In convalle Aït Mesan supra Arround (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. **DURANDII**, *nob.*, = O. Durandii (*Boiss. et Reut. Pug.* 111).

Mar. sept.—In humidis prope Tanger! (*Durand, in Herb. Pavon, ex Boiss. et Reut.*). (*Webb Herb.*)! Juxta lacum salsum (*G. Maw*)!

Mar. merid.—In convalle Ourika circ. 1000 m. s. m. legimus specimina quadripedalia et ultra!

Ar. Geog. O. latifolia per Europam omnem (exclusa arctica) diffusa, in Africa boreali et insula Madera occurrit. Var. *Durandii* statura maxima et bracteis longissimis insignis, in Imp. Maroccano et in Hispania (monente Boiss. et Reuter) obvia est.

Flores in spec. nostris Atlanticis quam in Tingitanis minores. Formam hanc sicut varietatem *O. incarnatæ*, L., enumerarunt Willkomm et Lange in 'Fl. Hisp.' i. 170; Duce cl. H. G. Reichenbach *Orchidearum* sagacissimo scutatore *O. latifoliæ* conjunxi.

ACERAS (*R. Br. in Hort. Kew.* ed. 3, v. 191).

A. ANTHROPOPHORA (*L.*, sub *Ophryde*; *R. Br. l. c.*; *Rchb. Icon.* xiii. tab. 5).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Mar. merid.—Ad radices Atlantis Majoris. Spec. unicum prope Tasseremout legit G. Maw!

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia). In Europa occidentali hinc inde infrequens.

A. INTACTA (*Link, in Schrad. Journ.* 1799, sub *Orchide*; *Rchb. Icon.* xiii. 148), = A. densiflora (*Brot. Fl. Lus.* i. 22, sub *Satyrio*; *Boiss. Voy. Esp.* 595), = A. secundiflora (*Bertol. Pl. Rar. Ital.* ii. 42, sub *Orchide*; *Lindl. Bot. Reg.* tab. 1525), = Orchis atlantica (*Willd. Sp. Pl.* iv. 42), = Tinea cylindrica (*Biv. Bern.*; *Todaro, Orch. Sic.* 8).

Mar. sept.—In monte Beni Hosmar prope Tetuan specimen unicum legit J. D. H.!

Ar. Geog. In regione Mediterranea imprimis occidentali. Deest tamen in Macaronesia.

A. PYRAMIDALIS (*L.*, sub *Orchide*; *Rich.*, sub *Anacamptide*; *Rchb. fil. in Rchb. Icon.* xiii. tab. 9).

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Ad radices et in regione inferiore Atlantis Majoris. In convalle Aït Mesan! Seksaoua! Milhaïn! Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. In Europa temperata late diffusa, in calidioribus regionis Mediterraneæ infrequens. Deest in Macaronesia.

PLATANTHERA (*Rich. Mus. Par.* iv. 20).

P. DIPHYLLA (*Link, in Schrad. Journ.* 1799, sub *Satyrio*; *Rchb. fil. in Rchb. Icon.* xiii. tab. 84),=Habenaria cordata, *R. Br.*,=Peristylus cordatus, *Lindl.*,=Orchis cordata (*Willd. Sp. Pl.* iv. 27).

Mar. sept.—In umbrosis collinis prope Tanger! (*Salzm. Exsicc.*)! In monte Djebel Kebir! (*Webb Herb.*)! Cap. Spartel!

Ar. Geog. Africa boreali-occidentalis. Macaronesia. Peninsula Iberica australis. Fertur etiam in Sardinia.

OPHRYS (*L. Gen.* 1011).

O. LUTEA (*Cavan. Icon.* ii. 46, tab. 160; *Rchb. Icon.* xiii. 94).

Mar. sept.—In umbrosis collinis inter Tanger et Tetuan! In monte Beni Hosmar prope Tetuan! (*Webb Herb.*)!

Ar. Geog. Per regionem Mediterraneam (exclusa Macaronesia) late dispersa.

O. SPECULUM (*Link, in Schrad. Journ.* 1799; *Rchb. Icon.* xiii. 96),= O. Scolopax (*Brot. non Cavan.*).

Mar. sept.—In collinis inter Tanger et Tetuan!

Ar. Geog. Distributio fere eadem ac *O. luteæ*, cui nimis proxima, et forsan cum *O. fusca* in unam speciem aggreganda.

O. BOMBYLIFLORA (*Link, in Schrad. Journ.* 1799; *Coss. Pl. Crit.* 64; *Rchb. Icon.* tab. 104),=O. tabanifera (*Willd. Sp. Pl.* iv. 68),=O. picta (*Salzm. Exsicc.*).

Mar. sept.—In monte Djebel Kebir! Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea calidior (inclusa Macaronesia). Deest in Gallia et in Italia superiore.

O. APIFERA (*Huds. Fl. Angl.* 340; *Rchb. Icon.* xiii. 105).

Mar. sept.—Prope Tanger!

Mar. merid.—Ad radices Atlantis Majoris. In convalle Aït Mesan circ. 1300 m.! Ourika (*J. D. H.*)! Reraya (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Europa media et australis. Africa borealis. Ex Asia Mediterranea non vidi.

O. SCOLOPAX (*Cavan. Icon.* ii. 46, tab. 161; *Rchb. Icon.* xiii. tab. 106).

Mar. sept.—Inter Tanger et Tetuan! Prope Tetuan!

Mar. merid.—In ditione Reraya circ. 1100 m.!

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia).

OPHRYS TENTHREDINIFERA (*Willd. Sp. Pl.* iv. 67; *Rchb. Icon.* xiii. 111).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea imprimis calidior (exclusa Macaronesia). In Oriente fit rarior.

CEPHALANTHERA (*Rich. Orchid. Eur.* 21).

C. XIPHOPHYLLUM (*L. fil. Suppl.*, sub *Serapiade*; *Rchb. Icon.* xiii. tab. 118),=C. ensifolia (*Swartz*, sub *Epipactide*; *Rich. l. c.*).

Mar. sept.—In monte Beni Hosmar prope Tetuan spec. unicum legit J. D. H.!

Ar. Geog. In Europa omni (exclusa arctica) late diffusa. In regione Mediterranea fere omni (exclusa Macaronesia) hinc inde occurrit.

SERAPIAS (*L. Gen.* 1012).

S. LINGUA (*L.*, *Rchb. Icon.* xiii. tab. 87).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Inter Tetuan et Ceuta!

Ar. Geog. Per regionem fere omnem Mediterraneam (exclusa Macaronesia) late dispersa.

S. CORDIGERA (*L.*, *Rchb. Icon.* xiii. 88).

Mar. sept. Tanger (*spec. ex Herb. Schousboe comm. Cosson*)! Inter Tetuan et Ceuta!

Ar. Geog. Per regionem Mediterraneam (exclusa Macaronesia) late diffusa.

Orchideæ in Imperio Maroccano nobis cognito paucæ et raræ, in prov. australioribus perpaucæ. Specimina nostra omnia sub oculos habuit clar. H. G. Reichenbach et quæ nobis incerta fuerunt determinavit.

IRIDEÆ (*Juss. Gen.* 57).

GLADIOLUS (*L. Gen.* 57).

G. SEGETUM (*Gawl. in Bot. Mag.* tab. 719; *Klatt in Linnæa*, xxxii. 701),=G. communis (*Desf. Fl. Atl.* i. 35; *Fl. Gr.* tab. 37; *Schousb. Gew. Marok.* 14, *non L.*),=G. byzantinus (*Baker MSS.*, *an Mill.*?).

Mar. sept.—Tanger (*Webb spec.*)! (*Schsb. l. c.*). Cap. Spartel! Prope Tetuan!

Ar. Geog. Species per regionem Mediterraneam (inclusa Macaronesia) late diffusa.

G. ILLYRICUS (*Koch in Sturm Deutschl. Fl.* 83, *et Syn. Fl. Germ.* 699), =“G. byzantinus?” (*Coss. Index Pl. Maroc.* 28, *non Mill.*).

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)! Ex eodem monte spec. ab indigena Ibrahim lectum comm. cel. Cosson!

Ar. Geog. Europa Mediterranea a Dalmatia usque fretum Herculis. Ditio Mogadorensis.

Proxime affinis *G. communi*, L., per Europam mediam et australem inter segetes obvio, et sicut subspecies enumerandus.

XYPHION (*Parl. Nuov. Gen. e Spec. Monocot.* 43).

X. FILIFOLIUM (*Boiss. Voy. Esp.* 602, tab. 170, sub *Iride*; *Klatt in Linnæa*, xxxii. 571; *Baker in Journ. Bot.* ix. 14).

Mar. sept.—"In fissuris rupium montis Beni Hosmar prope Tetuan" (*spec. ex Herb. Webb*)! Inter paludes salsas et El Araisch coll. cl. G. Maw et spec. benevole communicavit!

—— ——, var. INTERMEDIUM, *Baker, MSS.*,=X. tingitanum (*H. fil. in Bot. Mag.* tab. 5981; *non Boiss. et Reut.*, sub *Iride*).

Mar. sept.—Nascitur juxta paludes salsas ab urbe Tanger austro-occidentem versus, unde spec. nobis dedit Eques Drummond Hay legatus Britannicus!

Flores in hac forma pulcherrimi eis *X. tingitani* similes sed majores; foliis tamen filiformibus *X. filifolio* accedit.

Ar. Geog. *X. filifolium* in Africa boreali-occidentali et in peninsula Iberica australiore obvium est.

X. tingitanum (*Boiss. et Reut. Pug.* 113, sub *Iride*; *Baker in Journ. Bot.* ix. 13), = Iris Xyphium (*Schousb. Gew. Marok.* 15, nec aliorum)?

Mar. sept.—"In arvis argillosis circa Tingidem" (*Boiss. et Reut. l. c.*). "In fruticetis regionis Tingitanæ" (*Schousb. l. c.*). Inter Tanger et Tetuan bulbos legit cl. Maw et in horto educavit!

A præcedente differt foliis latioribus, late nec arcte canaliculatis; ut mihi videtur pro subspecie enumerandum.

Iris Xyphium apud Schousboe, sicut et apud ipsum Linnæum, est forsan nomen collectivum plurimas species et variatates complectens. Cel. Cosson mihi dedit ex herbario Schousboe specimina *Iris junceæ*, Poir., inter frutices montis Djebel Kebir lecta, cui "folia canaliculato-subulata" potius quam *I. tingitanæ*, Boiss. et Reut., tribuenda. Cæterum *I. juncea* (*Xyphion*, Parl. l. c.) est a *X. tingitano* probe distincta floribus luteis dimidio minoribus et foliis rectis pluries brevioribus.

X. SISYRINCHIUM (*L.*, sub *Iride*; *Baker in Journ., Bot.* ix. 42),=Gynandriris Sisyrinchium (*Parl. Nuov. Gen. e Spec. Monocot.* 52; *Klatt, Linnæa*, xxxii. 577).

Mar. sept.—Valde frequens tam in maritimis quam in locis siccis a mari remotis. Tanger! (*Webb Herb.*)! In monte Djebel Kebir! Cap. Spartel! Inter Tanger et Tetuan!

Mar. occid.—In monte Djebel Hadid haud procul Mogador!

Mar. merid.—In saxosis aridis prope Aïn Oumast! et alibi pluries visum!

Ar. Geog. Regio omnis Mediterranea calidior (exclusa Macaronesia). Deest in Gallia et in Italia superiore.

XYPHION FŒTIDISSIMUM (*L.*, sub *Iride*; *Parl. Nuov. Gen. e Spec. Monocot.* 45).

Mar. sept.—"In rupibus altioribus montis Beni Hosmar prope Tetuan" (*spec. ex Herb. Webb*)!

Ar. Geog. Species occidentalis et australis. In regione sublitorea Atlantica ab Anglia usque insulas Canarienses. In regione Mediterranea præsærtim occidentali diffusa, in Oriente nonnisi prope Byzantium et in Tauria detecta.

X. PSEUDACORUS (*L.*, *Schousb. Gew. Marok.* 16, sub *Iride*; *Parl. Nuov. Gen. e Spec. Monocot.* 45).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. l. c.*). Visum inter Tanger et Tetuan!

Ar. Geog. Europa omnis (exclusa arctica). In Oriente et in Africa boreali rarius occurrit. In Macaronesia deest.

IRIS (*L. Gen.* 59).

I. FLORENTINA (*L.*, *Desf. Fl. Atl.* i. 36; *Schousb. Gew. Marok.* 15).

Mar. sept.—Vidimus, nisi fallor, prope Tetuan, forsan cultam! Sec. Schousboe, l. c., colitur ornamenti gratia ad tumulos. Imp. Maroccani dubia civis.

Ar. Geog. Planta ex Europa austro-occidentali et Asia Mediterranea orta, diu culta et potius subspontanea quam indigena in regione Mediterranea occidentali. Indicatur in insulis Canariensibus; an indigena?

I. GERMANICA (*L.*, *Schousb. Gew. Marok.* 15; *Koch, Syn. Fl. Germ.* 807).

Mar. sept.—Vidimus cultam et subspontaneam juxta Tanger et Tetuan, præsertim ad tumulos Maurorum!

Mar. occid.—Vidimus cultam prope Mogador!

Mar. merid.—In convalle Aït Mesan juxta pagum Arround ad muros et aggeres agrorum!

Planta apud Arround lecta, forsan indigena, habet flores longiuscule pedicellatos.

Ar. Geog. Verisimiliter in regione Mediterranea fere omni indigena; in Europa media certe introducta. Indicatur in P. B. Webb, Phyt. Canar. iii. 314, sine loco natali.

ROMULEA (*Maratti, Pl. Romul. et Saturn.* 13).

Nomen genericum *Romulea* a Maratti l. c. anno 1772 impositum, a plerisque auctoribus prætervisum, quam *Trichonema* (Ker in Ann. of Bot. 1805, 222) antiquius et jure prioritatis gaudens.

Species Europææ hujus generis valde ludibundæ, ab auctoribus inordinate multiplicatæ, extricatu difficiles sunt; forsan omnes ad typos *Ixia Bulbocodium*, L., et *I. Columnæ*, R. et Sch., revocandæ.

ROMULEA BULBOCODIUM (*L. et Schousb. Gew. Marok.* 13, sub *Ixia*; *Seb. et Maur. Fl. Rom. Pr.* 17; *Parl. Fl. It.* iii. 242), = Trichonema Bulbocodium (*Ker in Ann. of Bot.* i. 222; *Koch, Syn. Fl. Germ., et plurim. auct.*).

Mar. sept.—Specimina deflorata mense Aprili prope Tanger passim vidimus et legimus! Formam grandifloram prope Tanger legit Salzmann (*Exsicc. in Herb. Gay*)! Florentem legimus in monte Beni Hosmar prope Tetuan circ. 1000 m. s. m.!

Mar. occid.—Casa Blanca! Mazagan!

Spec. plurima deflorata et subexsiccata incerta sunt. Schousboe sub *Ixia Bulbocodium* sua tres varietates (scil. "*major*," "*media*," et "*minor*") distinxit. Harum omnium loci natales, ut videtur, in ditione Tingitana; sub priore forsan intellexit *R. grandiscapam* nostram.

Ar. Geog. Regio omnis Mediterranea in zona litorali et sublitorali. Deest in Macaronesia, ubi ejus locum tenet planta proxime affinis mox enumeranda.

R. grandiscapa (*Webb, Phyt. Canar.* iii. 312; *Klatt in Linnæa*, xxxii. 671, sub *Trichonema*).

Mar. sept.—Legimus defloratam in litore sinus Tingitani urbi opposito in arenosis. Hujus formam scapo breviore (*T. umbellata*, Klatt in 'Linnæa' l. c.) legerunt Plummer et Blackmore. Specimen vidi pulchrum sexflorum (*Blackmore in Herb. Kew.*)!

Structura valde proxima *R. Bulbocodium*, et hujus varietati *Clusianæ* (Lange, Exsicc. Hisp.), sed scapi elongati, demum bipedales et ultra, et semina exacte globosa lævissima lucentia (in *T. Bulbocodio* subopaca et oculo armato minute granulata). Pro subspecie enumeranda videtur.

Ar. Geog. Planta Canariensis et Tingitana, verisimiliter alibi invenienda.

R. umbellata (Klatt, sub *Trichonema*) ex spec. Schousbœano prope Tingim lecto descripta, nulla nota stabili dignoscenda est.

R. COLUMNÆ (*R. et Sch. Syst. Veg. Mant.* 30, sub *Ixia*; *Seb. et Maur. Fl. Rom. Pr.* 18; *Parl. Fl. It.* iii. 253).

Mar. sept.—Tanger (*Schousboe*, sec. Klatt in Linnæa, xxxii. 659).

Ar. Geog. Regio Mediterranea imprimis occidentalis. Europa occidentalis ab Anglia usque Lusitaniam. In Oriente vix aut ne vix detecta.

R. RAMIFLORA (*Ten. Fl. Neap. Prod. Add.*; *Bert. Fl. It.* i. 223).

Mar. sept.—Prope Tanger (*Plummer, spec. in Herb. Kew.*)!

Ar. Geog. Hucusque in Italia et in agro Tingitano tantum detectus.

CROCUS (*L. Gen.* 55).

C. SEROTINUS (*Salisb. Parad.* tab. 3), var. SALZMANNI (*J. Gay in Féruss. Bull.* xv. 220; *H. fil. in Bot. Mag.* xcviii. tab. 6000), = C.

Salzmannianus (*Herb. in Bot. Reg.* 1847, tab. 4. fig. 4), = C. tingitanus (*Salzm. Exsicc.*; *Herb. in Not. ad Bot. Mag.* tab. 3868).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Peninsula Iberica. Var. nostra in agro Tingitano.

In Anglia culta floret mense Octobri. Quid sit *Crocus vernus* (Schousboe, Gew. Marok. 12), prope Tingim indicata, dijudicare nequeo.

AMARYLLIDEÆ (*R. Br. Prod.* 296).

LEUCOJUM (*L. Gen.* 402).

L. AUTUMNALE (*L.*, *Desf. Fl. Atl.* i. 281; *Schousb. Gew. Marok.* 139), = Acis autumnalis (*Herb. Amaryll.* 332; *Kunth, Enum.* v. 475).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Spec. ex herb. Schousboe in monte Djebel Kebir lectum comm. cel. Cosson!

Ar. Geog. Regio Mediterranea imprimis occidentalis ex Cephalonia et Sicilia usque Lusitaniam. Deest in Gallia australi in Italia continentali et in Macaronesia.

L. TRICHOPHYLLUM (*Schousb. Gew. Marok.* 140; *Brot. Fl. Lus.* i. 552; *Willk. et Lge. Fl. Hisp.* i. 148).

Mar. sept.—In campis arenosis Tingitanis loco dicto Scaarf el Kaab (*Schsb. l. c.*). Spec. ex herb. Schsb. benevole comm. cel. Cosson!

Mar. occid.—Prope Mogador (*Carstensen in Herb. Kew.*)!

Ar. Geog. Species sat rara, in peninsula Iberica et in Imperio Maroccano hinc inde obvia.

L. TINGITANUM, *Baker*, n. sp.

"Folia linearia, carnoso-herbacea, synanthia, pedalia, superne lin. 1, inferne lin. 2 lata; scapus pro grege robustus 1–1½-pedalis; umbella 6–7-flora, spathæ valvis pallidis lanceolatis subpollicaribus, ad basin fissis, pedicellis filiformibus, demum 12–21 lin. longis; perianthii limbus albidus, 7–8 lin. longus, segmentis lanceolatis subconformibus, distincte cuspidatis, nervis pluribus (in sicco brunneis) segregatis percursis; stamina 3 lin. longa, antheris lanceolatis filamento æquilongis. Bulbus deest."

Mar. sept.—Tanger (*Trovey Blackmore, spec. in Herb. Kew.*)!

Species nova, cum *L. trichophyllo* in Herb. Kew. commixta, ab oculatissimo J. G. Baker recognita et descripta. Monente cl. auctore, "a *L. trichophyllo* recedit habitu multo robustiore, foliis latioribus pedalibus, umbellis multifloris, genitalibus majoribus, cæterisque notis indicatis."

LAPIEDRA (*Lag. Gen. et Sp.* 14).

L. GRACILIS, *Baker*, n. sp.

"Bulbus globosus, diam. 3–4 lin. latus, tunicis brunneis membranaceis supra collum productis; folia solitaria, post anthesin producta, filiformia, subteretia, glabra; scapus filiformis, uniflorus, 2–5-pollicaris; spatha monophylla, lanceolata, membranacea, 6–8 lin. longa; pedicellus spatha brevior, florifer erectus; ovarium ovoideum, clavatum, 1½ lin. longum; perianthii albidi erecti tubus brevissimus, campanulatus; limbi segmenta subconformia, lanceolata, 5–6 lin. longa, nervis 4–5 obscuris medium versus percursa; stamina ad faucem tubi inserta, filamentis rectis filiformibus 4 lin. longis, antheris lanceolato-deltoideis semilineam longis, basi profunde sagittatis; stylus filiformis, curvatus, limbo æquilongus; stigma capitatum."

Mar. sept.—? Inter specimina Maroccana *Leucoji trichophylli* ex herb. Schousboe a cl. Lange communicata hanc speciem novam generis hucusque monotypici detexit et descripsit cl. J. G. Baker. Locus natalis adhuc incertus, sed verisimiliter in ditione Tingitana a Schousboe lecta fuit.

Primo aspectu *Leucojo trichophyllo* simillima, hæc stirps insigniter differt staminibus in perianthii tubo brevissimo insertis, nec epigynis, filamentis quam antheræ multoties longioribus, nec subæquilongis, antheris profunde sagittatis, nec basifixis. A *Lapiedra Martinezii* Hispanica aspectu longius distat, habitu multo graciliore, et foliis filiformibus, nec ovato-oblongis.

PANCRATIUM (*L. Gen.* 404).

P. MARITIMUM (*L., Kunth, Enum.* v. 658; *Schousb. Gew. Marok.* 145).

Mar. sept.—In arenosis pr. Tanger (*Schsb. l. c.*)! Folia visa in arenosis maritimis inter Tetuan et Ceuta!

Mar. occid.—Folia visa prope Mazagan!

Ar. Geog. Habitat in litoribus arenosis totius regionis Mediterraneæ (exclusa Macaronesia) et in Gallia occidentali.

TAPEINANTHUS (*Herb. Amaryll.* 190).

T. HUMILIS (*Cavan. Icon.* iii. tab. 207, fig. 2, sub *Pancratio*; *Herb. l. c.*; *Kunth, Enum.* v. 703) = Amaryllis exigua (*Schousb. Gew. Marok.* 146), = Sternbergia exigua (*Gawl. in Schult. Syst.* vii. 795; *Kunth, Enum.* v. 702), = Oporanthus exiguus (*Herb. Amaryll.* 180), = Carregnoa humilis (*Boiss. Voy.* 605).

Mar. sept.—In collibus et campis regionis Tingitanæ infrequens (*Schsb. l. c.*).

Ar. Geog. Nonnisi in Hispania Bætica et in agro Tingitano hucusque detectus.

Cavanilles primus hanc speciem raram cognovit et delineavit. Herbert anno 1837 genus novum, *Tapeinanthus*, proposuit, cum *Tapinantho*, Blume, non confundendum. Genus Blumeanum ab auctoribus recentioribus ad sectionem *Loranthi* reductum hodie negligendum. Botanici egregii Kunth et Herbert plantam Tingitanam verisimiliter nonnisi ex descriptione cognoverunt, dum eam in duobus generibus diversis enumerarunt. Confer J. Gay in Bull. Soc. Bot. Fr. vi. 88.

CORBULARIA (*Haw. Monogr.* 1).

C. BULBOCODIUM (*L.*, sub *Narcisso*; *Haw. Narc. Revis.* 123; *Herb. Amaryll.* 297, tab. 38. fig. 13; *Kunth, Enum.* v. 705).

Mar. sept.—Tanger (*fide Kunth, l. c.*).

Ar. Geog. Gallia austro-occidentalis. Hispania. Lusitania. Ager Tingitanus.

C. OBESA (*Salisb. Prodr.* 222, sub *Narcisso*; *Haw. Narc. Revis.* 122; *Herb. Amaryll.* 298; *Kunth, Enum.* v. 706).

Mar. sept.—Tanger (*fide Kunth, l. c.*).

Ar. Geog. Peninsula Iberica australis. Ditio Tingitana.

NARCISSUS (*L. Gen.* 403).

N. TAZETTA (*L.*, *Desf. Fl. Atl.* i. 282), = Hermione Tazetta (*Haw. Narc. Revis.* 142; *Kunth, Enum.* v. 740; *Schousb. Gew. Marok.* 141).

Mar. sept.—Tanger "in campis subhumidis" (*Schsb. l. c.*).

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

N. PAPYRACEUS (*Gawl. in Bot. Mag.* tab. 947; *Parl. Fl. It.* iii. 125), = N. niveus (*Loisel. Narc.* 27; *Gren. et Godr. Fl. Fr.* iii. 260; *an Willd. Enum. Suppl.* 16?), = Hermione papyracea, var. nivea (*Herb. Amaryll.* 408; *Kunth, Enum.* v. 746), = Hermione unicolor β, tingitana (*M. J. Rœm. Amar.* 231).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. In zona sublitorali regionis Mediterraneæ occidentalis a Sicilia usque Lusitaniam et Tingim. Ex Algeria non vidi.

N. SEROTINUS (*L. Sp. Pl.* 417; *Parl. Fl. It.* iii. 157; *J. Gay in Bull. Soc. Fr.* vi. 12), = N. serotinus, var. uniflora (*Desf. Fl. Atl.* i. 283, *sec. Parlatore*), = Hermione serotina (*Haw. Monogr.* 13; *Kunth. Enum.* v. 749).

Mar. occid.—Prope Saffi (fide Leared in 'Morocco and the Moors'). Nisi fallor, etiam a Broussonnet in regione litorali Atlantico olim lectus.

Ar. Geog. Regio Mediterranea fere omnis calidior (exclusa Macaronesia). Deest in Gallia australi et in Italia superiore et media.

N. elegans (*Haw. Monogr.* 13, sub *Hermione*; *Spach, ex Kunth, Enum.* v. 749; *Parl. Fl. It.* iii. 159; *J. Gay in Bull. Soc. Bot. Fr.* vi. 12), var. INTERMEDIA, *J. Gay, l. c.* = N. serotinus (*Salzm. Exsicc.*; *Schousb. Gew. Marok.* 141, saltem quoad pl. in herb. Schousb.).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! "In collibus et campis argillosis regionis Tingitanæ valde frequens" (*Schsb. l. c.*). Specimen ex herb. Schousboe, sub *N. serotino*, benev. concessit cel. Cosson!

Mar. occid.—Prope Mogador (*Carstensen, spec. in Herb. Kew.*)!

Ar. Geog. In zona sublitorali Italiæ mediæ et inferioris, et in Sicilia. Africa borealis. Hispaniæ dubia civis.

Ex descriptione brevi, nulla nota diagnostica illustrata, in Willk. et Lge. Fl. Hisp. i. 155, utrum sub *N. serotino* auctores formam hanc cum *N. serotino* genuino semel miscuerunt, vel hanc floræ Hispanicæ alienam esse judicarunt non satis liquet. Monentibus auctoribus citatis *N. serotinus* (Desf. Fl. Atl. i. 283, exclusa var. *uniflora*), et *N. oxypetalus* (Boiss. Voy. Esp. 606) inter synonyma *N. elegantis* memoranda sunt. *Hermione elegans* (Kunth, Enum. v. 748) est nomen collectivum, *Aureliam Broussonnetii*, J. Gay, cum *N. elegante* complectens. Primo intuitu *N. elegans* a *N. serotino* differt perigonii laciniis acutioribus, corona brevissima integerrima, nec ut in specie Linnæana tripartita, ex segmentis emarginatis subsexfida. Oculatissimus J. Gay tamen coronam subintegerrimam in *N. serotino* vidit, et quoad formam perigonii planta Tingitana, monente viro optimo semper deflendo, *N. serotino* propius quam *N. eleganti* accedit. Differentiæ foliorum leves; *N. serotinus* sæpius uniflorus, *N. elegans* 2–7 florus; sed hæ notæ vix constantes. Hic mihi videtur ad subspeciem reducendus.

NARCISSUS VIRIDIFLORUS (*Schousb. Gew. Marok.* 142, tab. 2; *Gay in Bull. Soc. Bot. Fr.* vi. 12), = Hermione viridiflora (*Haw. Narc. Revis.* 147; *Kunth, Enum.* v. 750), = Chloraster fissus (*Haw. Monogr.* 7, No. 1).

Mar. sept.—In ditione Tingitana rarissimus. "Copiose legi in loco elevato saxoso humido juxta Tingidem quando itur ab arce ad montem Shibil Kibir mox dextroversum flectendo cursum inter hortos mare versus" (*Schsb. l. c.*).

Ar. Geog. In utroque latere freti Herculis. Juxta Gibraltar et Algeciras. Floret Oct. Novemb. Planta in herbariis fere omnibus desiderata.

Foliis teretibus fistulosis, floribus viridibus a *N. serotino* satis differt.

AURELIA (*J. Gay in Bull. Soc. Bot. Fr.* vi. 87).

Genus ex forma perigonii infundibuliformi, laciniis tubo multo brevioribus in campanæ formam imbricatim conniventibus, insigne.

A. BROUSSONNETII (*Lag. Gen. et Sp.* 13, sub *Narcisso*; *J. Gay, l. c.*), = Narcissus obliteratus (*Willd. in Reliq., in Schult. Syst. Veg.* vii. 981), = Hermione obliterata (*Haw. Monogr.* 13), = H. elegans (*Kunth, Enum.* v. 749, *pro parte*).

Mar. occid.—Mogador (*Brouss. Herb., fide J. Gay, l. c.*). Prope Saffi (*ex bulbis a cl. Leared lectis, in Hort. Kew. cultis*).

Species parum nota Imp. Maroccani propria.

Agave Americana, L., planta in regione Mediterranea calidiore late diffusa, in Imp. Maroccanum olim introducta, ab incolis præsertim prope Tingim ad sepes construendas colitur; interdum fit spontanea.

DIOSCOREÆ (*R. Br. Prod.* 294).

TAMUS (*L. Gen.* 1119).

T. COMMUNIS (*L., Kunth, Enum.* v. 453).

Mar. sept.—Prope Tanger! In monte Beni Hosmar! et alibi prope Tetuan!

Mar. merid.—In ditione Mesfioua ad radices Atlantis Majoris (*J. D. H.*)!

Ar. Geog. Europa media. Regio fere omnis Mediterranea. Asia temperata. In insulis Canariis indicata, sed, monente Webb, planta harum insul. est *T. edulis*, Lowe.

ALISMACEÆ (*Juss. Dict. Sc. Nat.* vii. 474).

ALISMA (*L. Gen.* 460).

A. PLANTAGO (*L., Kunth, Enum.* iii. 148; *Schousb. Gew. Marok.* 170).

Mar. sept.—Tanger (*Schousb. l. c.*).

Ar. Geog. Planta amphigea in temperatis tam frigidioribus quam calidioribus utriusque orbis, et in Australia, diffusa. In Macaronesia desideratur.

A. RANUNCULOIDES (*L., Kunth. Enum.* iii. 149).

Mar. sept.—Tanger! Inter Tanger et Tetuan!

Ar. Geog. Europa fere omnis (excl. arctica). Africa borealis. Deest in Oriente.

DAMASONIUM (*Juss. Gen.* 46).

D. STELLATUM (*Rich. in Pers. Syn.* i. 400; *Kunth, Enum.* iii. 155).

Mar. occid.—"Ex horto Imperatoris prope Mogador" (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Europa occidentalis. Africa borealis. Indicatur etiam in Rossia media et in Persia juxta Mare Caspicum.

JUNCAGINEÆ (*Rich. Mém. Mus. Par.* ii. 365).

TRIGLOCHIN (*L. Gen.* 463).

T. BARRELIERI (*Loisel. Fl. Gall.* i. 725; *Kunth, Enum.* iii. 143), = T. palustre, var. β, *L.*, = T. palustre (*Schousb. Gew. Marok.* 170; *Brot. Fl. Lus.* i. 600).

Mar. sept.—Tanger, in maritimis et locis humidis! (*Schsb. l. c.*).

Ar. Geog. Regio Mediterranea imprimis occidentalis. Desideratur in Asia Mediterranea et in Macaronesia.

POTAMEÆ (*Juss. Dict. Sc. Nat.* 93).

POTAMOGETON (*L. Gen.* 174).

P. NATANS (*L., Kunth, Enum.* iii. 127; *Schousb. Gew. Marok.* 59).

Mar. occid.—In paludosis salsis prope Mogador! (*Schsb. l.c.*) (*Lowe Cat.*).

Ar. Geog. Species per regiones temperatas hemisphæræ borealis late diffusa, nec deest forma *P. fluitans* in ins. Canariensibus.

P. PECTINATUS (*L., Kunth, Enum.* iii. 137),=P. marinus (*Desf, Fl. Atl.* i. 150; *Schousb. Gew. Marok.* 59, *non L.*).

Mar. occid.—In aquis prope Mogador (*Schsb. l. c.*).

Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia). *P. marinus*, L., genuinus habitat in frigidioribus Europæ mediæ et septentrionalis, nec in regione Mediterranea hucusque detectus est.

ZOSTERA (*L. Gen.* 1032).

Z. MARINA (*L., Kunth, Enum.* iii. 116).

Mar. sept.—Vidimus in sinu Tingitano! legi florentem in altero litore freti Herculis prope Algeciras.

Ar. Geog. Ad litora Atlantica Europæ, Americæ borealis, et Africæ borealis. Nascitur etiam in mari Mediterraneo, et in Baltico, et in Ponto Euxino.

PALMÆ (*Juss. Gen.* 37).

CHAMÆROPS (*L. Gen.* 319).

C. HUMILIS (*L., Kunth, Enum.* iii. 248).

Per territorium Maroccanum omne nobis notum valde frequens, colles incultos interdum obtegens.

Mar. sept.—Circa Tanger! (*Salzm. Exsicc.*)! Tetuan! Vidimus in monte Beni Hosmar usque 375 m. s. m.!

Mar. occid.—Casa Blanca! Saffi! Mogador! (*Lowe Cat.*).

Mar. merid.—In regione inferiore et in convallibus calidioribus Atlantis Majoris usque 1300 m. s. m.! Shedma! Seksaoua! et alibi visa.

Ar. Geog. Species per regionem Mediterraneam, præsertim calidiorem, late diffusa. Deest in Macaronesia.

PHŒNIX (*L. Gen.* 1224).

P. DACTYLIFERA (*L., Kunth, Enum.* iii. 255).

Mar. sept.—Cultam pluries vidimus!

Mar. occid.—Juxta Mazagan! Saffi! et Mogador! certe culta.

Mar. merid.—In provinciis Cisatlanticis vix indigena. Juxta urbem Marocco sylvam magnam efficit, sed nullibi spontanea nascitur. In regionibus tamen a catena Atlantis Majoris meridiem versus *Phœnix* verisimiliter civis indigena est.

Ar. Geog. Patria *Phœnicis* in subtropicis Africæ borealis a Mari Rubro usque Oceanum et insulas Canarienses. Inde versus Mare Mediterraneum et Asiam occidentalem olim opere hominum diffusa est. Confer Webb, Phyt. Canar. iii. 189.

TYPHACEÆ (*Juss. Gen.* 25).

TYPHA (*L. Gen.* 1040).

T. ANGUSTIFOLIA (*L.*, *Kunth, Enum.* iii. 91).

Mar. sept.—Tanger (*Webb spec.*)! Folia visa!

Ar. Geog. Species cosmopolita in temperatis et calidioribus hemisphæræ borealis late diffusa. Occurrit etiam in America meridionali et in Australia; an indigena? In ins. Canariensibus obvia est stirps huic valde proxima, *T. macranthelia*, Webb, sicut subspecies vel varietas enumeranda.

AROIDEÆ (*Juss. Gen.* 23).

ARISARUM (*Targ. Tozz. in Ann. Mus. Fir.* ii. 67).

A. VULGARE (*Targ. Tozz. l. c.*; *Kunth, Enum.* iii. 15; *H. fil. in Bot. Mag.* tab. 6023),=Arum arisarum, *L.*

Mar. sept.—Ubique circa Tanger et Tetuan et in regione collina intermedia! (*Salzm. Exsicc.*)!

Mar. occid.—Folia vidimus frequentia circa Casa Blanca! Mazagan! Saffi! Pr. Mogador minus frequens!

Mar. merid.—Occurrit, sed infrequens, in regione inferiore a mari remota!

Rhizomata diu sub aqua contusa et lavata edulia fiunt, et tempore inediæ nutrimentum incolis præstant.

Ar. Geog. Regio fere omnis Mediterranea (inclusa Macaronesia).

Planta Canariensis *A. subexsertum* (Webb, Phyt. Can. iii. 301) occurrit etiam in Marocco, sed formis intermediis in typum transit, et vix pro varietate enumeranda videtur.

ARUM (*L. Gen.* 1028).

A. ITALICUM (*Mill. Dict.* No. 2; *Kunth, Enum.* iii. 24).

Mar. occid.—Casa Blanca!

Mar. merid.—Ad radices Atlantis prope Milhaïn (folia tantum visa)!

Ar. Geog. Regio Mediterranea imprimis occidentalis. In Anglia australi et Gallia occidentali obvium, in Oriente (præter Græciam) desideratur. Forma proxime affinis (*A. canariense*) in Canariis occurrit.

A. TENUIFOLIUM (*L.*, *Bert. Fl. It.* x. 249),=Biarum tenuifolium (*Schott, Meletem.* 17; *Kunth. Enum.* iii. 22).

Mar. sept.—? Legimus sine flore et fructu in monte Beni Hosmar prope Tetuan!

Ar. Geog. Lusitania. Hispania Granatensis. Sicilia. Italia inferior. Dalmatia. Græcia.

Ob. spec. nimis incompleta incertum, attamen folia adamussim conformia.

LEMNACEÆ (*Duby, Bot. Gall.* i. 533).

LEMNA (*L. Gen.* 1038).

L. GIBBA (*L., Rchb. Icon.* vii. tab. 16),=Telmatosphace gibba (*Schleid. in Linnæa,* viii. 391; *Kunth, Enum.* iii. 6).

Mar. merid.—Reraya (sine flore et fructu)!

Ar. Geog. In aquis stagnantibus hemisphæræ borealis temperatæ late diffusa. Adest in Macaronesia; sed ex Algeria spec. non vidi.

LILIACEÆ (*DC. Théor. Elém.* 249).

GAGEA (*Salisb. in Ann. Bot.* ii. 555).

G. FOLIOSA (*R. et Sch. Syst.* vii. 1703; *Kunth, Enum.* iv. 236),=G. polymorpha (*Boiss. Voy.* 611).

Mar. merid.—Specimen unicum legi in regione subalpina montis Djebel Tezah circ. 2700 m.!

Ar. Geog. Habitat in Hispania, Corsica, Sicilia, Græcia, et in Imp. Maroccano.

HYACINTHUS (*L. Gen.* 170).

H. ROMANUS (*L., Desf. Fl. Atl.* i. 308; *Schousb. Gew. Marok.* 160),= Bellevalia romana (*Rchb. Fl. Exc.* i. 105; *Kunth, Enum.* iv. 307).

Mar. sept.—Tanger in agris (*Schsb. l. c.*).

Ar. Geog. In regione Mediterranea centrali et occidentali (exclusa Macaronesia) late diffusus.

MUSCARI (*Mill. Dict.* v. 197).

M. COMOSUM (*L.,* sub *Hyacintho*; *Mill. Dict.* No. 2; *Desf. Fl. Atl.* i. 309),=Bellevalia comosa (*Kunth, Enum.* iv. 306).

Mar. sept.—Tanger (*J. D. H.*)!

Mar. merid.—Sat frequens in cultis reg. inferioris. Prope Seksaouâ! Pluries alibi visum in convallibus Atlantis Majoris!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Europa media hinc inde introductum.

M. RACEMOSUM (*L.,* sub *Hyacintho*; *Mill. Dict.* No. 3; *Schousb. Gew. Marok.* 161),=Botryanthus odorus (*Kunth, Enum.* iv. 131).

Mar. sept.—Tanger (*Schsb. l. c.*).

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia). Europa media, imprimis occidentalis.

SCILLA (*L. Gen.* 419).

S. AUTUMNALIS (*L., Kunth, Enum.* iv. 315; *Schousb. Gew. Marok.* 155).

Mar. sept.—Tanger "in vinetis et locis arenosis" (*Schsb. l. c.*).

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia). Europa occidentalis.

S. OBTUSIFOLIA (*Poir. Voy.* ii. 149; *Kunth. Enum.* iv. 315), var. FALLAX (*Baker in Journ. Linn. Soc.* xiii. 235),=S. fallax (*Steinheil in Ann. Sc. Nat.* ser. 2, i. 103).

Mar. sept.—Tanger (*Salzm. spec. in Herb. Kew.*)!

Ar. Geog. Species in Algeria, Sardinia, et Corsica obvia. Var. *fallax* nonnisi in agro Tingitano.

S. HEMISPHÆRICA (*Boiss. Voy. Esp.* 613), var. GLABRA, *Boiss., l. c.*, =S. peruviana (*L., Brot. Fl. Lus.* i. 526; *Schousb. Gew. Marok.* 153),=S. peruviana, var. glabra (*Kunth, Enum.* iv. 319; *Baker in Journ. Linn. Soc.* xiii. 240),=S. Clusii (*Parl. Fl. It.* ii. 462),=Caloscilla Clusii (*Jord. et Fourr. Icon.* tab. 245).

Mar. sept.—Tanger versus montem Djebel Kebir! (*Schsb. l. c.*) (*Webb Herb.*)!

Ar. Geog. S. hemisphærica in regione Mediterranea occidentali a Sicilia et Melita usque Lusitaniam, et ex agro Tunetano usque Tingim, diffusa est. Varietates plurimas sicut species distinctas descripserunt Jordan et Fourreau in opere citato.

Nomen triviale Linnæanum, ex errore Clusii natum, omnino falsum et hodie prætermittendum.

S. VERNA (*Huds. Fl. Angl.* 142; *Kunth, Enum.* iv. 319), var. MAJOR (*Boiss. Voy. Esp.* 613; *Kunth, l. c.* 320),=S. Ramburei (*Boiss. Elench.* 61; *Willk. et Lge. Fl. Hisp.* i. 214),=S. italica (*L. Herb., non Sp. Pl.* 442, *fide Baker in Journ. Linn. Soc.* xiii. 242). Huc fere certe referenda est *S. italica* (Schousb. Gew. Marok. 153).

Mar. sept.—Tanger (Brouss. spec. in herb. Hooker olim Gouan)! (*Schsb. l. c.*)? Bulbos, forsan huc referendos, invenimus prope Tetuan!

Ar. Geog. Species occidentalis ex Anglia, Hibernia, et usque Hispaniam, præsertim in zona sublitorali diffusa. Var. Boissieriana in peninsula Iberica et in ditione Tingitana obvia est.

S. MONOPHYLLA (*Link, in Schrad. Journ.* ii. 319; *Willk. et Lge. Fl. Hisp.* i. 214),=S. tingitana (*Salzm. Exsicc., non Schsb. Gew. Marok.*?), =S. pumila (*Brot. Fl. Lus.* i. 527; *Bot. Mag.* tab. 3023; *Kunth, Enum.* iv. 320).

Mar. sept.—Tanger (*Webb spec.*)! (*Salzm. Exsicc.*)! In monte Djebel Kebir! Spec. ex herb. Schousboe in eodem monte lectum benevole comm. cel. Cosson sub "*S. tingitana*, Schsb. Herb."

Ar. Geog. Peninsula Iberica. Ager Tingitanus.

Quid sit *Scilla tingitana* (Schousb. Gew. Marok. 155) mihi non satis liquet. In scheda herb. Webb ad spec. *S. monophyllæ* fertur "*S. pumila*, Brot.", "*S. tingitana*, Salzm., non Schsb., sec. Boiss." Revera b. Schousboe vix speciem novam folio unico insignem descripserit verbis "foliis lanceolatis planis apice involutis," nec eam *S. mauritanicæ* suæ simillimam dixerit. Certum est b. Schousboe in herb. suo *S. monophyllam* sub nomine "*S. tingitana*" conservasse.

Specimen *S. tingitanæ*, Schousb. in herb. Willdenow, verisimiliter ab ipso Schousboe receptum, ex Kunth, Enum. iv. 322, est omnino *S. monophylla*, Lk. Ex descriptione *S. tingitana*, Schousb., a *S. lusitanica*, L., vix differt. Hujus specimina nulla vidi, et deest in herbariis fere omnibus.

SCILLA LINGULATA (*Poir. Voy.* ii. 151; *Desf. Fl. Atl.* i. 208, tab. 85; *Kunth, Enum.* iv. 324), = S. bipartita (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Blackmore, spec. in Herb. Kew.*)!

Ar. Geog. Africa boreali-occidentalis.

S. MAURITANICA (*Schousb. Gew. Marok.* 154; *Kunth, Enum.* iv. 324), = S. vincentina (*Hffgg. et Link in N. Schrift. Ges. Naturf.* iv. 17; *Kunth, Enum.* iv. 323; *Baker in Journ. Linn. Soc.* xiii. 244).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir (*Schsb. l. c.*).

Ar. Geog. Lusitania. Ager Tingitanus.

Nomen triviale Schousbœanum antiquius et satis aptum prætuli.

S. HISPANICA (*Mill. Dict.* No. 8; *Baker in Journ. Linn. Soc.* xiii. 255), = S. campanulata (*Ait. Hort. Kew.* i. 444; *Kunth, Enum.* iv. 326; *Schousb. Gew. Marok.* 153), = Endymion campanulatus, *Willk.*

Mar. sept.—"Passim in dumetis regionis Tingitanæ" (*Schsb. l. c.*). A nullis recentiorum visa, an error?

Mar. merid.—Legi in regione superiore Atlantis Majoris circ. 2700 m. in monte Djebel Tezah!

Ar. Geog. Peninsula Iberica. Marocco.

S. HÆMORRHOIDALIS (*Webb, Phyt. Canar.* ii. 336, tab. 230).

Mar. occid.—? Mogador (*Lowe Cat.*, cum signo interrogationis).

Deest in herbario Lowe hodie Kewensi, et forsan errore aliquo indicatur. Species Canariensis, hucusque non alibi visa.

URGINEA (*Steinheil in Ann. Sc. Nat.* ser. 2, i. 321).

U. MARITIMA (*L.*, sub *Scilla*; *Baker in Journ. Linn. Soc.* xiii. 221), = U. Scilla (*Steinheil, l. c.*; *Kunth, Enum.* iv. 332), = Scilla maritima (*Schousb. Gew. Marok.* 151, *et plur. auct.*).

Mar. sept.—Vidimus bulbos maximos in collibus Tingitanis sat frequentes! "Ubique in campis et collibus" (*Schsb. l. c.*).

Schousboe l. c. certe de regione Tingitana loquitur; in provinciis meridionalibus facile invenienda, certe non frequens.

Ar. Geog. In regione Mediterranea tota præsertim calidiore late diffusa, nec semper in maritimis.

URGINEA ANTHERICOIDES (*Poir. Voy.* ii. 149; *Kunth, Enum.* iv. 333; *Baker in Journ. Linn. Soc.* xiii. 220), = Scilla serotina (*Schousb. Gew. Marok.* 151; *non Gawl. in Bot. Mag.*). Verisimiliter huc etiam ducenda est *U. hesperia* (Webb, Phyt. Canar. iii, 339).

Mar. occid.—"Vulgaris in campis arenosis prope Saffi"! (*Schsb. l. c.*).

Ar. Geog. Africa boreali-occidentalis. Verisimiliter etiam in Canariis occurrit. Plantam Webbianam non vidi.

ORNITHOGALUM (*L. Gen.* 418).

In hoc genere a cl. J. G. Baker optime tractato, ordinem specierum in Journ. Linn. Soc. xiii. pp. 257 et seq., secutus sum.

O. COMOSUM (*L., Kunth, Enum.* iv. 359; *Baker, l. c.* 262), var ATLANTICUM, *Baker MSS.*

Mar. merid.—Spec. incompletum in Herb. Kew. asservatum in convalle Aït Mesan supra Arround legerunt cl. Rein et Fritsch! Ejusdem var. spec. in monte Djebel Afougueur ab indigena Ibrahim lectum benev. comm. Cosson!

Ar. Geog. Species in Italia, Istria, Dalmatia, Macedonia et etiam prope Vindobonam obvia. Var. nostra nonnisi in Atlante Majore hucusque detecta.

Bracteæ elongatæ, basi vaginantes, flores juniores superantes.

O. TENUIFOLIUM (*Guss. Prod. Fl. Sic.* i. 413; *Baker, l. c.* 265), = O. Gussonii (*Ten. Fl. Nap.* iii. 337, tab. 226; *Kunth, Enum.* iv. 364).

Mar. merid.—Specimen unicum legi in subalpinis montis Djebel Tezah circ. 2700 m.!

Ar. Geog. Europa australis a Gallia Mediterranea ad Græciam. Atlas Major. Varietates in insula Cypro et in Ægypto.

O. ORTHOPHYLLUM (*Ten. Syll.* 594; *Kunth, Enum.* iv. 361; *Baker, l. c.* 265), = O. algeriense (*Jord. et Fourr. Icon.* tab. 121). Huc etiam sicut varietas adjungendum *O. bæticum* (Boiss. Elench. 84).

Mar. sept.—In monte Djebel Kebir pr. Tanger! In saxosis prope Tetuan! et in monte Beni Hosmar!

Mar. merid.—In clivo montis Djebel Tezah circ. 1700 m. (*J. D. H.*)!

Ar. Geog. Italia media et inferior. Hispania. Africa boreali-occidentalis. Forma proxime affinis in Transylvania.

O. UMBELLATUM (*L., Kunth, Enum.* iv. 362; *Baker, l. c.* 256, et forsan *Schousb. Gew. Marok.* 150),

Mar. sept.—? In agris humidis regionis Tingitanæ (*Schsb.*).

Mar. occid.—Casa Blanca!

Synonymon Schousbœanum forsan ad *O. orthophyllum* referendum?

Ar. Geog. Europa fere omnis, exclusa arctica. Africa borealis. Oriens. In Macaronesia deest.

ORNITHOGALUM ARABICUM (*L. ex parte*; *Kunth, Enum.* iv. 353; *Baker, l. c.* 270).

Mar. sept.—Tanger (*Webb Herb.*)! Tetuan (*Webb Herb.*)!

Mar. occid.—Rabat (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Per regionem Mediterraneam omnem, præsertim calidiorem, dispersum, sed infrequens.

O. PYRENAICUM (*L. Sp. Pl.* 440, *non herb.*; *Kunth, Enum.* iv. 355; *Baker, l. c.* 275), var. FLAVESCENS (*Baker, l. c.*),=O. flavescens (*Lam. Ill.* tab. 242),=O. sulfureum (*R. et Sch. Syst.* vii. 518; *Kunth, Enum.* iv. 356),=O. pyrenaicum (*L. herb.*).

Mar. merid.—Supra Amsmiz (*J. D. H.*)!

Ar. Geog. Species per Europam mediam et australem diffusa. *O. flavescens* in Italia, Gallia, Hispania et in Atlante Majore. In Asia Minore detexit etiam Balansa.

Specimina Africana præter nostra non vidi.

Cel. Koch *O. flavescens* pro specie distincta habuit; pace cl. Baker mihi videtur pro subspecie enumerandum.

O. SESSILIFLORUM (*Desf. Fl. Atl.* i. 295; *Kunth, Enum.* iv. 371; *Baker, l. c.* 276).

Mar. merid.—Legi in saxosis supra Seksaoua!

Ar. Geog. Africa boreali-occidentalis.

O. NARBONENSE (*L.*, *Kunth, Enum.* iv. 355; *Baker, l. c.* 277),=O. stachyoides (*Ait. Hort. Kew.* i. 441; *Kunth, Enum.* iv. 356).

Mar. sept.—Tanger! Tetuan (*Webb spec.*, sub *O. pyrenaico*)!

Mar. occid.—Casa Blanca!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

O. UNIFOLIUM (*Gawl. in Bot. Mag.* tab. 935; *Kunth, Enum.* iv. 359; *Baker, l. c.* 282),=O. nanum (*Brot. Fl. Lus.* i. 529; *non Sibth. et Sm.*),=Scilla unifolia (*L., Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir copiose provenit!

Ar. Geog. Peninsula Iberica. Ditio Tingitana.

DIPCADI (*Medik. in Act. Palat.* vi. 431).

D. SEROTINUM (*L.*, sub *Hyacintho*; *Medik. l. c.*),=Lachenalia serotina (*Willd. Sp. Pl.* ii. 175; *Schousb. Gew. Marok.* 161),=Uropetalum serotinum (*Gawl. in Bot. Reg.* fol. 156; *Boiss. Voy. Esp.* 617; *Kunth, Enum.* iv. 378, et auct. recent. fere omnium), var. FULVUM, =Hyacinthus fulvus (*Cavan. Anal. Cienc. Nat.* iii. 47),=Dipcadi fulvum (*Webb, Phyt. Canar.* iii. 340).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Djebel Kebir! (*Schsb. l. c.*). Prope Tetuan visum!

Mar. occid.—? Mogador (*Brouss. fide Kunth*, forsan cum spec. Canariensi commutatum).

Mar. merid.—In regione inferiore et ad radices Atlantis pluries visum. Sheshaoua! In saxosis supra Seksaoua!

Ar. Geog. Regio Mediterranea occidentalis a Liguria usque Lusitaniam et insulas Canarienses.

Invito animo nomen genericum barbarum, a summis scientiæ magistris prætermissum, ab optimo Webb infauste resuscitatum, conservare debui.

D. fulvum, Webb, est nil nisi var. robustior *D. serotini*, florum colore saturatiore diversa.

ALLIUM (*L. Gen.* 409).

A. AMPELOPRASUM (*L., Kunth, Enum.* iv. 383), = A. multiflorum (*Desf. Fl. Atl.* i. 288), = A. mogadorense (*Willd. Herb.*; *R. et Sch. Syst.* vii. 1004).

Mar. occid.—Mazagan! Saffi! Mogador (*Brouss. ex Willd. Herb.*).

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia). Anglia. Sarnia.

A. ROTUNDUM (*L., Kunth, Euum.* iv. 385).

Mar. merid.—Prov. Haha (*J. D. H.*)! Prov. Shedma!

Ar. Geog. Europa centralis et australis. Oriens. Hispania. Marocco. Deest in Macaronesia. Ex Algeria non vidi.

A. SPHÆROCEPHALUM (*L., Kunth, Enum.* iv. 387; *Schousb. Gew. Marok.* 148).

Mar. sept.—"Passim in arenosis regionis Tingitanæ" (*Schsb. l. c.*).

Ar. Geog. Europa media. Regio Mediterranea (inclusa Macaronesia).

A. FLAVUM (*L., Kunth, Enum.* iv. 402), var. TAURICUM (*Kunth, l. c.*).

Mar. merid.—Specimen unicum legi in saxosis supra Seksaoua!

Ar. Geog. Species late dispersa, nullibi frequens, per regionem Mediterraneam ex Armenia usque Hispaniam centralem diffusa. Spec. Africana, præter nostrum, non vidi.

Specimen nostrum incompletum et ideo subdubium.

A. PALLENS (*L., Kunth, Enum.* v. 405; *Schousb. Gew. Marok.* 148).

Mar. sept.—Tanger (*Webb Herb.*)! (*Schsb. l. c.*).

Mar. occid.—In provincia Haha prope Mogador! In monte Djebel Hadid (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—In aridis juxta Aïn Oumast!

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia). Pannonia.

ALLIUM PANICULATUM (*L., Sibth. et Sm. Fl. Gr.* iv. 16; *an Kunth, Enum.* iv. 407?),=A. monspessulanum (*Willd. Enum. Suppl.* 16; *Kunth, Enum.* iv. 404, *non Gouan*),=A. intermedium (*DC. Fl. Fr.* v. 318; *Kunth, Enum.* iv. 406),=A. dentiferum (*Webb, Phyt. Canar.* iii. 345).

Mar. sept.—Tanger! (*Webb spec.*, sine nomine specifico)!

Mar. occid.—Mazagan (specimen nanum floribus rubris)!

Mar. merid.—Mzouda!

Ar. Geog. Regio fere omnis Mediterranea (inclusa Macaronesia). Gallia occidentalis. Indicatur etiam in Rossia australi. Spec. ex Algeria non vidi.

—— ——, var. TENUIFLORUM, *Baker, MSS.*,=A. tenuiflorum (*Ten. Fl. Nap.* i. 165; *Parl. Fl. It.* ii. 548; *Kunth, Enum.* iv. 409).

Mar. merid.—Legimus in monte Djebel Tezah circ. 1800 m.! Juxta Seksaoua circ. 1000 m.!

Ar. Geog. In Italia media et inferiore, et in Sicilia, late diffusa. In Atlante Majore. Verisimiliter alibi invenienda.

A. TRIQUETRUM (*L., Kunth, Enum.* iv. 436; *Schousb. Gew. Marok.* 149).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. l. c.*). In monte Djebel Kebir!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia). Græcia excepta deest in Oriente.

A. pendulinum (*Ten. Fl. Nap.* i. 168, tab. 31; *Kunth, Enum.* iv. 437).

Mar. sept.—In monte Djebel Kebir prope Tanger!

Ar. Geog. Italia. Corsica. Sicilia. Marocco.

Forsan præcedenti nimis proximum. Pro subspecie enumeravi.

A. ROSEUM (*L., Kunth, Enum.* iv. 438).

Mar. sept.—Tanger (*Webb Herb.*)! In regione collina inter Tanger et Tetuan! In saxosis pr. Tetuan! Ad radices montis Beni Hosmar!

Mar. occid.—In apricis prope Casa Blanca!

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia).

A. SUBHIRSUTUM (*L., Kunth, Enum.* iv. 440; *Schousb. Gew. Marok.* 147).

Mar. sept.—Tanger (*Schsb. l. c.*). Tetuan (*Webb Herb.*)! Inter Tetuan et Ceuta!

—— ——, var. SUBVILLOSUM,=A. subvillosum (*Salzm. in R. et Sch. Syst.* vii. 1104; *Willk. et Lge. Fl. Hisp.* i. 212).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Species per regionem Mediterraneam (exclusa Macaronesia) late diffusa. Varietas in peninsula Iberica et in agro Tingitano.

ALLIUM CHAMÆMOLY (*L., Kunth, Enum.* iv. 447; *Schousb. Gew. Marok.* 150).

Mar. sept.—Tanger in campis argillossis (*Schsb. l. c.*). (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia).

A. NIGRUM (*L., Kunth, Enum.* iv. 447; *Schousb. Gew. Marok.* 148) =A. magicum (*Salzm. Exsicc., Willd.,* et verisimiliter *L. Sp. Pl.* 424).

Mar. sept.—Tanger! (*Webb Herb.*)! (*Salzm. Exsicc.*)! (*Schsb. l. c.*).

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia).

ASPHODELUS (*L. Gen.* 421).

A. CERASIFERUS (*J. Gay in Ann. Sc. Nat.* ser. 4. vii. § 2, 15; *Willk. et Lge. Fl. Hisp.* i. 204),=A. ramosus (*L., Kunth, Enum.* iv. 555, pro parte; *Salzm. Exsicc.*),=A. albus (*Boiss. Voy. Esp.* 618).

Mar. sept.—Legimus in monte Djebel Kebir prope Tanger! Tanger (*Salzm. Exsicc. in Herb. Kew.*)!

Ar. Geog. Regio Mediterranea occidentalis a Gallia australi usque Tingim et Lusitaniam. Ex Algeria non vidi.

Linnæus tres species hujus sectionis semel confusit, quæ nobis, duce cel. J. Gay, probe distinctæ videntur, et a patribus, saltem pro parte, haud ignoratæ. Inter synonyma plurima a beato Gay citata notandum est "Asphodelus major flore albo ramosus et non ramosus" (J. Bauhin, Hist. ii. 265; edit. Chabræus, Ebroduni, 1651), ubi legitur "flores stellati *Ornithogali* majores foliis albis stria rubra notatis constantes apicibus luteis, quibus decedentibus capitula succedunt cerasis paria semen continentia copiosum triquetrum fuscum."

A. MICROCARPUS (*Viv. Fl. Cors. Spec.* 5; excl. syn. *Clusii*; *Boiss. Voy. Esp.* 618; *J. Gay, l. c.*),=A. ramosus (*L., Kunth, Enum.* iv. 555, pro parte; *Schousb. Gew. Marok.* 156),=A. æstivus (*Brot. Fl. Lus.* i. 525; *Kunth, l. c.* 557), nomen antiquius sed ineptum, flores enim vernales sunt et mense Majo planta semper fructifera.

Mar. sept.—Tanger "in campis et fruticetis frequens" (*Schsb. l. c.*). Hanc speciem vidimus prope Tanger, sed spec. non servavi!

Mar. occid.—Mogador (*Lowe,* sub *A. ramoso,* spec. incompletum in Herb. Kew.)!

Mar. merid.—Ex convalle Aït Mesan (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio fere omnis Mediterranea (inclusa Macaronesia).

A. FISTULOSUS (*L., Kunth, Enum.* iv. 557).

Mar. sept.—In monte Djebel Kebir prope Tanger! In collibus inter Tanger et Tetuan!

Ar. Geog. Regio Mediterranea imprimis calidior (inclusa Macaronesia).

—— ——, var. TENUIFOLIUS,=A. tenuifolius (*Cavan. in Anal. Cienc. Nat.* iii. 46, tab. 27; *Kunth, Enum.* iv. 558),=A. fistulosus (*Schousb. Gew. Marok.* 156; *Lowe Cat.* 35).

Mar. occid.—Valde frequens in arenosis prope Mogador! (*Schsb. l. c.*). (*Lowe Cat.*).

Mar. merid.—Prov. Mtouga (*R. et Fr. spec. in Herb. Kew.*)!

Primo intuitu planta Mogadorensis a typo solenni *A. fistulosi* valde diversa est, sed intersunt formæ plurimæ intermediæ, ex gr. planta ex prov. Mtouga supra citata; immo specimina *A. fistulosi* Tingitana a typo recedunt et *A. tenuifolio* nimis vicina sunt.

ANTHERICUM (*L. Gen.* 422).

A. LILIAGO (*L., Koch, Syn. Fl. Germ.* 616),=Phalangium Liliago (*Schreb. Spicil.* 36; *Kunth, Enum.* iv. 594), var. BÆTICUM,=A. bæticum (*Boiss. Voy. Esp.* 619, tab. 172).

Mar. sept.—In monte Djebel Kebir prope Tanger! (*Webb spec.*)! Frequens in saxosis circa Tetuan! Ad radices montis Beni Hosmar!

Mar. merid.—In convalle Aït Mesan legit G. Maw!

Ar. Geog. Species in montanis Europæ mediæ et australis. Var. *bæticum* in peninsula Iberica et in Africa boreali-occidentali.

Culta ex radicibus Tingitanis planta nostra ad typum propius revertit, et fit *A. Liliago*, var. *australe* (Willk. et Lge. Fl. Hisp. i. 202).

SIMETHIS (*Kunth, Enum.* iv. 618).

S. PLANIFOLIA (*L.*, sub *Antherico*; *Gren. et Godr. Fl. Fr.* iii. 222),= S. bicolor (*Desf. Fl. Atl.* i. 304, tab. 90, sub *Antherico*; *Kunth, l. c.*), =Anthericum planifolium (*Schousb. Gew. Marok.* 157; *Salzm. Exsicc.*).

Mar. sept.—Circa Tanger, et copiose in monte Djebel Kebir! (*Salzm. Exsicc.*)! (*Schsb. l. c.*). Tetuan (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia). Europa occidentalis ex Hibernia usque Lusitaniam.

APHYLLANTHES (*L. Gen.* 408).

A. MONSPELIENSIS (*L., Kunth, Enum.* iv. 647).

Mar. sept.—In clivo montis Beni Hosmar prope Tetuan!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

MELANTHACEÆ (*R. Br. Prod.* 272).

COLCHICUM (*L. Gen.* 457).

C. BIVONÆ (*Guss. Cat. H. Boccad.* 72; *Kunth, Enum.* iv. 139).

Mar. merid.—? Fructiferum in monte Djebel Tezah circ. ad 2400 m. legit J. D. H.!

Folia hysteranthia elongata, anguste linearia, sesquipedalia. Planta cujus flores nondum vidi, nimis incerta et facile ad sp. novam referenda.

Ar. Geog. Regio Mediterranea calidior. Deest in Macaronesia et in Gallia australi.

C. AUTUMNALE (*L., Kunth, Enum.* iv. 140),=C. montanum (*Schousb. Gew. Marok.* 170).

Mar. sept.—Tanger (Salzm. spec. in herb. Gay, hodie Kewensi)! (*Schsb. l. c.*).

Ar. Geog. Europa temperata fere omnis. Regio Mediterranea.

C. ARENARIUM (*W. K. Pl. rar. Hung.* ii. 195, tab. 179), var.?

Mar. merid.—In convalle Aït Mesan supra Arround, et in jugo Tagherot a 2200 m. usque 2900 m.!

Ar. Geog. Colchicum arenarium, species imprimis Europæ austro-orientalis, et in Hispania obvia, forsan per regionem omnem Mediterraneam dispersa est. Planta proxime affinis in Italia præsertim meridionali. Diagnoses in hoc genere difficillimæ.

Specimina nostra incerta faice *C. alpino* similiora, sed folia terna. Species ulterius inquirenda.

ERYTHROSTICTUS (*Schlecht. in Linnæa*, 1826, p. 90).

E. PUNCTATUS (*Cavan. Anal. Cienc. Nat.* iii. 49, tab. 26, sub *Melanthio*; *Schlecht. l. c.*; *Kunth, Enum.* iv. 154), quocum conjungendus *E. gramineus* (Cavan. l. c. p. 50, sub *Melanthio*; Schlecht. l. c.; Kunth, l. c. 155).

Mar. occid.—Legimus copiose in arenosis prope Mogador, ubi hanc stirpem singularem primus legit Broussonnet! Conf. Cavan. l. c.

Planta satis variabilis. Simul crescunt exemplaria foliis latis et angustis ex quibus species duas stabilivit cel. Cavanilles. Forma intermedia in Hispania unico loco prope Almeria a cl. Lange detecta fuit.

Ar. Geog. Marocco. Hispania austro-orientalis.

SMILACEÆ (*R. Br. Prod.* 292).

CONVALLARIA (*L. Gen.* 425).

C. MULTIFLORA (*L., Koch, Syn.Fl. Germ.* 705),=Polygonatum multiflorum (*All. Fl. Ped.* i. 131; *Kunth, Enum.* v. 138).

Mar. sept.—In monte Beni Hosmar prope Tetuan anno 1869, a cl. G. Maw detecta. Ex radice in horto culta specimina mihi benevole misit!

Ar. Geog. Species in temperatis præsertim frigidioribus hemisphæræ borealis late diffusa. In montibus Asiæ mediæ obvia, fit rarior in calidioribius. In Hispania nonnisi in provinciis septentrionalibus. Præter spec. Maweana ex Africa nulla vidi.

SMILAX (*L. Gen.* 1120).

S. ASPERA (*L., Kunth, Enum.* v. 214).

Mar. sept.—Tanger!

Mar. occid.—Mogador (*Lowe Cat.*). In monte Djebel Hadid haud procul Mogador! (*R. et Fr. spec. in Herb. Kew.*)! Agadir (*Coll. Indig.* 1871)!

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia).

S. MAURITANICA (*Poir. Voy.* ii. 263; *Kunth, Enum.* v. 216).

Mar. sept. Tanger! magis frequens quam *S. aspera.*

Mar. merid.—In convalle Aït Mesan circ. 1500 m. s. m. (*J. D. H.*)!

Ar. Geog. Regio Mediterranea imprimis occidentalis. In Macaronesia adest.

ASPARAGINEÆ (*Kunth in Act. Acad. Berol.* 1842, 25).

ASPARAGUS (*L. Gen.* 458).

A. SCABER (*Brign. Fasc. Pl. Forojul.* 22; *Kunth, Enum.* v. 62).

Mar. sept.—Tanger (*Goudot, fide Kunth, l. c.*).

Ar. Geog. Per regionem Mediterraneam (exclusa Macaronesia) hinc inde obvius. An idem ac *A. altissimus,* Munby?

A. ACUTIFOLIUS (*L., Kunth, Enum.* v. 65; *Schousb. Gew. Marok* 160).

Mar. sept.—Tanger (*Schousb. l. c.*). In maritimis prope Tanger! Prope Tetuan!

Mar. occid.—? In insula Mogador! specimen omnino incertum.

Mar. merid.—In convalle Aït Mesan circ. 1400 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

A. APHYLLUS (*L., Kunth, Enum.* v. 66; *Schousb. Gew. Marok.* 160).

Mar. sept.—Sat frequens prope Tanger! (*Schsb. l. c.*). Ad radices montis Beni Hosmar prope Tetuan! Inter Tetuan et Ceuta!

Ar. Geog. Regio Mediterranea præsertim calidior (inclusa Macaronesia).

A. stipularis (*Forsk. Fl. Æg.-Arab.* 72), = A. horridus (*L. fil. Suppl.* 203; *Kunth, Enum.* v. 67).

Mar. sept.—Tetuan (*Webb Herb.*)!

Mar. merid—Videtur satis frequens in regione inferiore. Prov. Haha! Sheshaoua! Tasseremout (*G. Maw*)! In planitie prope urbem Marocco (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio omnis Mediterranea calidior. Deest in Gallia et in Italia continentali.

Proximus et valde affinis *A. aphyllo*; characteres autem videntur satis constantes, et subspeciem sensu nostra sistit.

ASPARAGUS SCOPARIUS (*Lowe in Trans. Camb. Phil. Soc.* iv. 11; *Kunth, Enum.* v. 74).

Mar. merid.—Legimus pluries in regione inferiore. Prov. Shedma! Inter Ourika et Reraya! In convalle Aït Mesan circ. 1200 m.!

Specimina nostra Maderensibus simillima, sed ob defectum florum et fructus incerta.

Ar. Geog. A. scoparius est Macaronesiæ et prov. meridionalium Imp. Maroccani propria species.

A. FŒNICULACEUS (*Lowe in Journ. Linn. Soc.* v. 44).

Mar. occid.—Mogador (*Lowe, spec. in Herb. Kew.*)! Agadir (*Coll. Indig.* 1871)!

Species, ut videtur, nonnisi Maroccana, parum cognita, flores et fructus hucusque non visi.

Hic est verisimiliter *A. declinatus* (Schousb. Gew. Marok. 159) juxta Saffi indicatus. Nequit esse *A. declinatus* (L., Kunth, l. c. 59); sed ex diagnosi manca dijudicare non audeo.

ASPARAGOPSIS (*Kunth in Act. Acad. Berol.* 1842, 35).

A. ALBA (*Kunth, Enum.* v. 84),=Asparagus albus (*L., Schousb. Gew. Marok.* 159).

Mar. sept.—Tanger (*Schsb. l. c.*).

Mar. occid.—Saffi (*Schsb. l. c.*).

—— ——, var. PASTORIANUS,=A. Pastorianus (*Webb, Phyt. Canar.* iii. tab. 229).

Mar. occid.—Prope Mogador (*Lowe Cat.*). In insula Mogador spec. mancum sed certe huc referendum!

Ar. Geog. A. albus in regione Mediterranea occidentali a Calabria usque Lusitaniam et Imp. Maroccanum. Var. *Pastorianus* nascitur in Canariis et in Marocco.

Quid sit *Asparagus retrofractus* (Schousb. Gew. Marok. 159), prope Saffi lectus, non satis liquet. Species hujus nominis Linnæana est planta Capensis haud facile in ditione nostra invenienda.

Asparagi species Maroccanæ plurimæ ulterius inquirendæ, et studio diuturno in vivo egent.

RUSCUS (*L. Gen.* 1139).

R. HYPOPHYLLUM (*L., Kunth, Enum.* v. 275).

Mar. sept.—Vidi sine fl. et fr. prope Tanger! Tetuan (*Webb Herb.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

Ar. Geog. Regio Mediterranea calidior. In Madera obvius, desideratur in insulis Canariensibus. Deest in Gallia et in Italia superiore.

JUNCEÆ (*R. Br. Prod.* 257).

LUZULA (*DC. Fl. Fr.* iii. 158).

L. FORSTERI (*Sm. Eng. Bot.* tab. 1293, sub *Junco*; *Desv. Journ. de Bot.* i. 141; *Kunth, Enum.* iii. 297),=Juncus pilosus (*Schousb. Gew. Marok.* 166, *non L.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schsb. l. c.*) In monte Beni Hosmar prope Tetuan!

Ar. Geog. Europa media. Regio Mediterranea fere omnis (exclusa Macaronesia).

JUNCUS (*L. Gen.* 437).

J. GLAUCUS (*Ehrh. Beitr.* vi. 83; *Kunth, Enum.* iii. 316).

Mar. sept.—Vidi in monte Djebel Kebir pr. Tanger, sed spec. non servavi!

Ar. Geog. Species per regiones temperatas et frigidas hemisphæræ borealis latissime diffusa.

J. CONGLOMERATUS (*L., Koch, Syn. Fl. Germ.* 726),=J. communis, var. α (*E. Mey. Junc.* 20; *Kunth, Enum.* iii. 320).

Mar. sept.—Pluries vidi prope Tanger et Tetuan! Specimen ex herb. Schousboe benevole comm. Cosson!

—— ——, var. EFFUSUS,=J. effusus (*L., Koch, Syn. Fl. Germ.* 726),= J. communis, var. β (*E. Mey. Junc.* 20; *Kunth, l. c.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Nihil dubito *J. conglomeratum* et *J. effusum* nexu genetico colligari; notæ tamen differentiales subconstantes videntur, et forsan *J. effusus* melius pro subspecie enumerandus erit.

Ar. Geog. Tam *J. conglomeratus* quam *J. effusus* sunt plantæ cosmopolitæ per orbem terrarum latissime diffusæ. Prædiligunt regiones temperatas, sed zonam subtropicam non fugiunt. *J. effusus* in Macaronesia indicatur.

J. MARITIMUS (*Lam. Dict.* iii. 264; *Kunth, Enum.* iii. 322; *Schousb. Gew. Marok.* 163).

Mar. sept.—Legi mense Junio fructiferum pr. Tanger! (*Schsb. l. c. et spec.*)! (*Salzm. Exsicc.*)! Tetuan (1851)!

Ar. Geog. Species cosmopolita, per orbem totum in maritimis regionum temperatarum diffusa.

J. ACUTUS (*L.*, ex parte; *Kunth, Enum.* iii. 323; *Schousb. Gew. Marok.* 162).

Mar. sept.—Tanger (*Salzm. spec. in Herb. Kew.*) Inter Tetuan et Ceuta!

Mar. occid.—Mazagan! Mogador (*Lowe Cat.*). Aïn el Hadjar haud procul Mogador in regione sublitorali!

Ar. Geog. In arenosis maritimis Europæ et Africæ borealis ex Britannia usque Macaronesiam, et regionis omnis Mediterraneæ.

JUNCUS MULTIFLORUS (*Desf. Fl. Atl.* i. 313, tab. 91; *Kunth, Enum.* v. 323).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In lacustribus salsis pr. Tingim (*Webb spec.*)! Cap. Spartel (*spec. ex Herb. Schousb.*)!

Mar. occid.—Aïn el Hadjar haud procul Mogador!

Ar. Geog. Species in maritimis regionis Mediterraneæ (exclusa Macaronesia) late diffusa, hucusque in Hispania non detecta.

J. LAMPROCARPUS (*Ehrh. Calam.* No. 126; *Kunth, Enum.* iii. 325).

Mar. sept.—(*Salzm. Exsicc.*)!

Mar. occid.—Prope Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Per Europam et Asiam temperatam late diffusus. In Africa boreali infrequens. Desideratur in Macaronesia.

J. STRIATUS (*Schousb. in E. Mey. Junc.* 27; *Kunth, Enum.* iii. 330),=J. Fontanesii (*J. Gay in Laharpe, Monog. Junc.* 42; *Kunth, l. c.* 329),=J. sylvaticus (*Brot. Fl. Lus.* i. 517, *et Salzm. Exsicc.*; *non aliorum*).

Mar. sept.—Prope Tanger (*Webb spec.*)! (*Salzm. Exsicc.*)! (*Schousb. spec. ex Herb.*)! (*Goudot, fide Kunth, l. c.*). Specimen in monte Beni Hosmar immaturum forsan huc referendum!

Hujus forma minor, *J. echinuloides* (Webb, It. Hisp., non Brot.), in Marocco nondum detecta fuit.

Ar. Geog. Occurrit hinc inde in regione Mediterranea occidentali, a Sicilia et ditione Tunetana usque fretum Herculis.

J. SUPINUS (*Mœnch, Enum. Pl. Hass.* 296, tab. 5; *Koch, Syn. Fl. Germ.* 730),=J. bulbosus (*L. Sp. Pl.* ed. i. 327, no. ed. ii.),=J. uliginosus (*Roth, Mag. f. d. Bot.* ii. 16; *Kunth, Enum.* iii. 334).

Mar. sept.—Mense Junio prope Tanger visus, sed spec. non servavi! Specimen prope Cap. Spartel lectum ex herb. Schousboe benev. misit cel. Cosson!

Ar. Geog. Europa fere omnis ex Lapponia usque Calabriam. In regione Mediterranea infrequens. Deest in Macaronesia.

J. HETEROPHYLLUS (*Léon Duf. in Ann. Sc. Nat.* v. 88; *Parl. Fl. It.* iii. 342).

Mar. sept.—Legi in uliginosis reg. litoralis inter Tetuan et Ceuta!

Duce cl. Kunth, qui hanc speciem satis distinctam inter synonyma *J. uliginosi* enumeravit, specimina supra citata ad varietatem *J. supini* in herbario retuli, donec oculatissimus Cosson errorem indicavit.

Ar. Geog. Gallia præsertim occidentalis. Corsica. Italia. Sicilia. Africa Tingitana. In Hispania nondum detectus, nec spec. ex Algeria vidi. Verisimiliter per regionem Mediterraneam occidentalem dispersus.

JUNCUS PYGMÆUS (*Thuil. Fl. Paris.* i. 178; *Kunth, Enum.* iii. 341).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Europa media et occidentalis. Regio Mediterranea occidentalis (exclusa Macaronesia). Fertur in Græciæ insula Milo, sed valde dubius.

J. fasciculatus (*Schousb. in E. Mey. Junc.* 28; *Kunth, Enum.* iii. 330 *non Bert. Fl. It., nec Schrank, Bayer. Fl.*),=J. acuminatus (*Salzm. Exsicc.*)!

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir (*spec. ex Herb. Schousboe*)! (*Webb Herb.*)!

Mihi videtur *J. pygmæo* nimis proximus et hujus proles hexandra. Pro subspecie enumeravi.

Ar. Geog. Stirps, ut videtur, ditionis Tingitanæ propria.

J. CAPITATUS (*Weigel, Obs.* 28; *Kunth, Enum.* iii. 346; *Schousb. Gew. Marok.* 164).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir (*Schsb. l. c.*). Juxta Cap. Spartel! Inter Tanger et Tetuan! Prope Tetuan!

Mar. occid.—Casa Blanca!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Europa occidentali etiam obvius.

J. TENAGEIA (*Ehrh. Phyt.* No. 63; *Kunth, Enum.* iii. 352).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir (*spec. ex Herb. Schousboe comm. Cosson*)!

Ar. Geog. Europa media. Asia media. Regio Mediterranea occidentalis (exclusa Macaronesia).

In regione sublitorali Hispaniæ australis non indicatur; legi tamen in collibus prope San Roque!

J. BUFONIUS (*L., Kunth, Enum.* iii. 353; *Schousb. Gew. Marok.* 166).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! In monte Djebel Kebir! (*Schsb. l. c.*). Juxta Cap. Spartel!

Mar. occid.—Casa Blanca!

Mar. merid.—Satis frequens ad radices Atlantis Majoris. Mesfioua! Sektana! Ourika! et in convallibus calidioribus—Aït Mesan! Amsmiz!

—— ——, var. FASCICULATUS (*Koch, Syn. Fl. Germ.* 732),=J. fasciculatus (*Bert. Fl. It.* iv. 190, *non Schousb.*).

Mar. sept.—Spec. in humidis prope Tanger lectum ex herb. Schousboe comm. cel. Cosson!

Mar. occid.—Prope Casa Blanca! Prope Mogador! (*Lowe Cat.*).
Mar. merid.—Juxta Amsmiz!
Ar. Geog. Species cosmopolita per regiones temperatas orbis fere totius dispersa.

Juncus foliosus (*Desf. Fl. Atl.* i. 315, tab. 92).
Mar. sept.—Tanger (*Webb spec.*)! (*Salzm. Exsicc.*)! (*Spec. ex Herb. Schousboe*)!
J. bufonio valde proximus et sicut subspecies enumerandus, differt tamen foliis latioribus, anthela magis decomposita, et, fide cl. Lange, seminibus (oculo fortiter armato) etiam transverse striolatis.
Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis.

CYPERACEÆ (*DC. Fl. Fr.* iii. 99).

CYPERUS (*L. Gen.* 66).

C. MUNDTII (*N. ab Esen. in Linnæa*, ix. 283, sub *Pycreo*; *Kunth, Enum.* ii. 17; *Böckeler in Linnæa*, xxxv. 448),=C. turfosus (*Salzm. Exsicc.*),=C. Eragrostis (*Vahl, Enum.* ii. 322; *Kunth, Enum. l. c.* 8), var. *sec. Kunth, l. c.*
Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Spec. ex Herb. Schousboe, comm. Cosson*)!
Ar. Geog. Species quoad distributionem anomala. Habitat in Africa australi ad prom. Bonæ Spei, in Hispania australi, et ad ripas rivulorum prope Tanger. Species proxime affinis *C. Eragrostis*, Vahl, etiam in India orientali et in insula Mauritio obvia est.

C. LÆVIGATUS (*L. Cod.* 61; *Böckeler, l. c.* 487),=C. mucronatus (*Rottb. Gram.* 10, tab. 8. fig. 4),=C. mucronatus, var. albidus (*Kunth, Enum.* ii. 17),=C. cosyrensis (*Tineo in Guss. Fl. Sic.* ii. 779).
Mar. occid.—In arenosis prope Mogador!
Ar. Geog. Species amphigea in tropicis et subtropicis utriusque orbis diffusa. In regione Mediterranea nonnisi in Ægypto, in insula Pantellaria, et prope Mogador hucusque detecta.

C. distachyos (*All. Auct. ad Fl. Ped.* 18; *Parl. Fl. It.* ii. 19),=C. mucronatus, var. γ (*Kunth, l. c.* 20),=C. junciformis (*Cavan. Ic.* 3).
Mar. sept.—Prope Cap. Spartel (*spec. ex Herb. Schousboe*)!
Mar. occid.—Casa Blanca! In arenosis haud procul Mogador!
Ar. Geog. Stirps cosmopolita in regione Mediterranea (inclusa Macaronesia) late diffusa, in India orientali et in Australia certe indigena. Loci natales plurimi incerti ob synonyma confusa.
C. distachyos est *C. lævigato* proxime affinis, sed notis plurimis differt. In priore spiculæ elongatæ fere semper binæ, squamæ angustiores atro-

fuscæ, achenium ovoideo-ellipticum apice mucronatum; in *C. lævigato* spicæ numerosæ dimidio breviores ovatæ, squamæ præsertim basin versus multo latiores albidæ, achenium demum obovatum muticum.

Pro subspecie enumeravi stirpem Allionii, sed forsan pro specie omnino diversa vindicanda est.

CYPERUS ÆGYPTIACUS (*Gloxin, Obs.* 20, tab. 3; *Kunth, Enum.* ii. 48),=C. schœnoides (*Griseb. Spic. Fl. Rum.* ii. 421),=Schœnus mucronatus (*L., Rchb. Icon.* viii. fig. 680; *Schousb. Gew. Marok.* 16; *Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. l. c.*). Inter Tetuan et Ceuta!

Mar. occid.—Rarius occurrit in arenosis prope Mogador!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

C. FUSCUS (*L., Kunth, Enum.* ii. 37).

Mar. sept.—In arenosis subhumidis videtur haud infrequens. Vidi prope Tetuan! Specimen prope Tanger lectum comm. cel. Cosson!

Ar. Geog. Species per Europam et Asiam temperatam, et regionem omnem Mediterraneam (exclusa Macaronesia) late diffusa.

C. ROTUNDUS (*L., Kunth, Enum.* iii. 58),=C. hexastachyos (*Rottb. Gram.* 28, tab. 14),=C. tetrastachyos (*Desf. Fl. Atl.* i. 44, tab. 8), =C. olivaris (*Targ. Tozz., Bertol. Fl. It.* i. 267),=C. esculentus (*Gouan, Fl. Monsp.* 388; *Schousb. Gew. Marok.* 18; *an L. Cod.* 380?)

Mar. sept.—Tanger (*Schsb. l. c.*). Specimen ex herb. Schousb. comm. Cosson!

Mar. occid.—Mogador? (*Lowe Cat.*).

Mar. merid.—In ditione Mesfioua haud procul urbi Marocco!

Ar. Geog. Species per regiones tropicales orbis totius late diffusa. In regione Mediterranea (inclusa Macaronesia) satis frequens.

C. LONGUS (*L., Kunth, Enum.* ii. 60), var. BADIUS,=C. badius (*Desf. Fl. Atl.* i. 45, tab. 7; *Salzm. Exsicc., et plurim. auct.*).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Mogador!

Mar. merid.—In regione inferiore haud infrequens. Sheshaoua! In irrigatis urbis Marocco! Ourika!

C. badius videtur forma meridionalis *C. longi*, foliis et radiis brevioribus, spicis aggregatis.

Ar. Geog. Species per Europam mediam et regionem Mediterraneam diffusa. Var. *badius* præsertim in regione Mediterranea calidiore (inclusa Macaronesia), et in India orientali obvia.

SCHŒNUS (*L. Gen.* 65).

S. NIGRICANS (*L., Koch, Syn. Fl. Germ.* 640), = Chætospora nigricans (*Kunth, Enum.* ii. 323).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In rupibus juxta Cap. Spartel! (*Webb Herb.*)!

Ar. Geog. Europa media. Regio fere omnis Mediterranea (exclusa Macaronesia).

HELEOCHARIS (*R. Br. Prod.* 80).

H. PALUSTRIS (*L.*, sub *Scirpo*; *Kunth, Enum.* ii. 147).

Mar. sept.—Tanger! Inter Tanger et Tetuan!

Mar. occid.—Mazagan!

Ar. Geog. Species amphigea in temperatis hemisphæræ borealis, in Africa australi, et in insulis Oceani obvia.

H. UNIGLUMIS (*Link, Jahrb. d. Gewk.* fasc. iii. 77, sub *Scirpo*; *Schult. in Syst. Veg. Mant.* ii. 88; *Koch, Syn. Fl. Germ.* ed. 2, 852), = H. palustris (*Kunth, l. c.* pro parte).

Mar. sept.—Legi prope Cap. Spartel! In monte Beni Hosmar pr. Tetuan!

Ar. Geog. Europa media; in regione Mediterranea nonnisi in Italia septentrionali et in Hispaniæ prov. Navarra indicata; verisimiliter sæpe cum *H. palustri* commutata.

Ab *H. palustri* differt statura minore, culmis tenuioribus, spicis minoribus spadiceis, et squama infima culmum omnino amplectente, nec semiamplexicauli. Mihi videtur species satis distincta.

SCIRPUS (*L. Gen.* 67).

S. LACUSTRIS (*L., Kunth, Enum.* ii. 164).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Europa fere omnis. Asia media et Mediterranea. Africa borealis. Fertur etiam in America boreali, in Australia et in insulis Sandvicensibus.

S. LITORALIS (*Schrad. Fl. Germ.* i. 142, tab. 5; *Kunth, Enum.* ii. 166), = S. Tabernæmontani (*Salzm. Exsicc., non Gmel.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Europa australi. Oriens. In Hispania et Algeria nondum detectus.

S. MARITIMUS (*L., Kunth, Enum.* ii. 167).

Mar. sept.—Tanger (*J. D. H.*)! Prope Cap. Spartel meridiem versus! Tetuan 18 51)!

Mar. occid.—Casa Blanca!

Ar. Geog. Species cosmopolita per orbem omnem late diffusus, sæpius, sed non semper, in maritimis crescens.

Scirpus pubescens (*Poir. Voy.* ii. 254; *Desf. Fl. Atl.* i. 52, tab. 10),=Fuirena pubescens (*Kunth, Enum.* ii. 183),=Scirpus ciliaris (*Schousb. Gew. Marok.* 19, *non L.*).

Mar. sept.—"Rarissime in locis humentibus regionis Tingitanæ" (*Schsb. l. c.*). Spec. in monte Djebel Kebir lectum ex herb. Schousboe comm. cel. Cosson!

Ar. Geog. Africa boreali-occidentalis. Lusitania. Corsica, et in insulis Balearicis.

S. Savii (*Seb. et Maur. Fl. Rom. Prod.* 22; *Bert. Fl. It.* i. 288),=S. filiformis (*Savi, Fl. Pis.* i. 46, *non Lam.*),=S. numidianus (*Vahl, Enum.* ii. 254, *et Herb., fide Kunth*),=Isolepis Saviana (*Schult. in Syst. Veg. Mant.* ii. 63; *Kunth, Enum.* ii. 193),=S. setaceus *Schousb. Gew. Marok.* 19).

Mar. sept.—Frequens in ditione Tingitana. Legi in maritimis juxta urbem Tanger! et prope Cap. Spartel! Tetuan (*Webb Herb.*)! In clivo montis Beni Hosmar!

Mar. merid.—In ditione Reraya et in convalle Aït Mesan a 1000 m. ad 1200 m.!

Ar. Geog. Species per regiones temperatas totius orbis diffusa. In Europa occidentali ab Hibernia, ubi frequentissima, usque fretum Herculis, et inde in Marocco et in Macaronesiam se protendit. Per regionem omnem Mediterraneam dispersa, sed non ubique obvia. In Asia orientali, Japonia, et Australasia diffusa, et verisimiliter etiam in America obvia.

Species diu vexata et nominibus plurimis in herbariis dissimulata. Ab hac vix, aut ne vix, differt *Isolepis pygmæa* (Kunth, Enum. ii. 191). Catervam synonymorum citare nolui, dum plurima verificare nequeo. Nomen *S. numidianus,* Vahl, prioritate gaudet; sed nomen triviale ab auctoribus recentioribus fere omnibus acceptum mutare nolui. Cl. Böckeler in 'Linnæa,' xxxvi. 500, *S. Savii* cum *S. setaceo,* L., semel junxit. Ego, consentientibus auctoribus gravissimis, has pro speciebus distinctis, fructus structura facile dignoscendis, teneo, et formas intermedias nunquam vidi.

Specimina Tingitana *S. gracilis* (Salzm. Exsicc.), sec. Rchb. Icon. viii. 34, ad *Heleocharin carniolicam,* Koch, referenda sunt. Specimina Salzmanniana non vidi; sed monente oculatissimo Cosson meram formam *S. Savii* sistunt.

S. Holoschœnus (*L., Desf. Fl. Atl.* i. 49; *Schousb. Gew. Marok.* 18), =Isolepis holoschœnus (*R. et Sch. Syst.* ii. 115; *Kunth, Enum.* ii. 200).

Mar. sept.—Tanger (*Schsb. l. c.*), (*Salzm. Exsicc.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mazagan! Prope Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Prope Tasseremout!

—— ——, var. AUSTRALIS (*Koch, Syn. Fl. Germ.* 856),=S. australis, *L., sec. Vahl.*

Mar. sept.—Tanger (*spec. ex Herb. Schousboe comm. Cosson*)!

Ar. Geog. In regione omni Mediterranea (inclusa Macaronesia) late diffusus. In Europa media et occidentali rarius occurrit.

SCIRPUS MICHELIANUS (*L., Desf. Fl. Atl.* i. 51),=Isolepis Micheliana (*R. et Sch. Syst. Veg.* ii. 114; *Kunth, Enum.* ii. 203).

Mar. occid.—Ad ripas fluminis Sebou (*Brouss., fide Desfontaines, l. c.*).

Ar. Geog. Species in Europa media et australi infrequens. In Asia temperata necnon in India orientali obvia, et (fide Kunth) in Senegambia.

CAREX (*L. Gen.* 1046).

C. DIVISA (*Huds. Fl. Angl.* 405; *Kunth, Enum.* ii. 372).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Cap. Spartel!

Mar. merid.—In prov. Shedma!

Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).

C. VULPINA (*L., Kunth, Enum.* ii. 383).

Mar. sept.—Prope Tanger legi fructiferam mense Junio!

Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia). Europa media. Asia media.

C. DIVULSA (*Good. in Linn. Trans.* ii. 160; *Kunth, Enum.* ii. 385).

Mar. sept.—Tanger! ubi sat frequens (*Salzm. Exsicc.*)! Tetuan!

Mar. merid.—In collibus saxosis prope urbem Marocco (*G. Maw*)!

Ar. Geog. Species per hemisphæram borealem temperatam fere omnem diffusa, nec deest in Macaronesia.

C. LINKII (*Schkuhr, Caric.* ii. 39; *Kunth, Enum.* ii. 478),=C. gynomane (*Bertol. Pl. rar. Lig.* dec. 2, 43); et forsan = C. distachya (*Desf. Fl. Atl.* ii. 336).

Mar. sept.—Mauritania Tingitana (*Kunth, l. c.*). Prope Tanger in monte Djebel Kebir! In monte Beni Hosmar pr. Tetuan!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia). In Oriente nonnisi prope Byzantium indicata.

C. BASILARIS (*Jordan, Obs. Fragm.* iii. 246, tab. 12; *Walp. Ann. Bot. Syst.* iii. 703).

Mar. sept.—Legi specimen unicum juxta Cap. Spartel!

Legi etiam in collibus supra Algeciras!

Ar. Geog. Species hucusque in Gallia australi et in Algeria tantum indicata. Adest in Hispania Bætica et in ditione Tingitana; verisimiliter alibi invenienda.

C. HALLERIANA (*Asso, Syn.* 133, tab. 9; *Willk. et Lge. Fl. Hisp.* i.

125),=C. gynobasis (*Vill. Dauph.* ii. 206; *Boiss. Voy. Esp.* 630),= C. alpestris (*All. Fl. Ped.* ii. 270; *Kunth, Enum.* ii. 479).

Mar. sept.—In monte Beni Hosmar prope Tetuan!

Mar. merid. — In Atlante Majore; legi in convalle Amsmiz circ. 1500 m.!

Ar. Geog. Europa media et australis. Ad litora maris Caspii (fide Kunth). Spec. nulla ex Asia Minore nec ex Algeria vidi.

CAREX AMBIGUA (*Link in Schrad. Journ.* 1799, 308; *Kunth, Enum.* ii. 479).

Mar. sept.—Legi prope Cap. Spartel!

Mar. merid.—In convalle Aït Mesan, spec. nimis immatura!

Species paucis cognita, sed probe distincta utriculis glabris ellipticoovoideis tricostatis, nec, ut in *C. Halleriana*, obovato-oblongis trigonis plurinerviis.

Spec. ex Lusitania Transtagana in Herb. Kew. nostris conformia sunt, nisi præsentia in spec. nostris fl. fœmineorum 2–4 ad basin spicæ superioris masculæ.

Spec. ex Atlante Majore nimis immatura majora, culmis fere pedem longis, sed Tingitanis similia. Planta ulterius inquirenda.

Ar. Geog. Lusitania. Marocco.

C. DISTANS (*L., Kunth, Enum.* ii. 449).

Mar. sept.—? In clivo montis Beni Hosmar prope Tetuan legi specimen nimis immaturum!

Spec. nostrum incertum, sed vix ad aliam speciem referendum. Teste cl. Willkomm *C. distans* nascitur in isthmo Gibraltarico.

Ar. Geog. Frequens occurrit in Europa media et australi; necnon in Caucaso, et in America boreali.

C. FISSIROSTRIS (*Ball in Journ. Bot.* 1875, 206).

Dense cæspitosa; culmi numerosi, humiles (subspithamæi), foliacei, læves, cum foliis elevato-striati; folia angusta sæpius undulato-recurva, scabriuscula; spica mascula solitaria, squamis dorso obscure trinervibus, pallidis vel inferioribus tricoloribus; spicæ fœmineæ 3–4 oblongæ, pedicellatæ, squamis dorso viridibus apice mucronatis, vel inferioribus in quavis spica membranaceis obtusis; utriculi (vix satis maturi) virides, glabri, nervis duobus extramarginalibus prominentibus et aliis subobsoletis instructi, in rostrum breve, apice in dentes duos acutos divergentes fissum, acuminati; bracteæ spicarum inferiorum foliaceæ, elongatæ, spicam masculam superantes.

Mar. merid.—Legimus in regione media Atlantis Majoris, in rupestribus siccis montis Djebel Tezah circ. 2000 m.! et verisimiliter eandem plantam in convalle Aït Mesan supra Arround, ultra 2000 m. s. m.!

Species in grege *C. distantis* collocanda. Ab hac differt imprimis statura multo minore, foliis angustioribus, spicis minoribus, squamis spic. fœmin. inferioribus obtusis, utriculo minus inflato, nervis minus prominentibus, rostro glabro apice insigniter fisso, et bracteis pluries longioribus.

CAREX GLAUCA (*Scop. Fl. Carn.* ii. 233; *Kunth, Enum.* ii. 459),=C. recurva (*Huds. Fl. Angl.* 413), var. SERRULATA, *nob.*,=C. serrulata (*Biv. Sic. Pl. Manip.* iv. 9; *Parl. Fl. It.* ii. 180).

Mar. sept.—In rupibus prope Cap. Spartel! In monte Beni Hosmar prope Tetuan!

—— ——, var. ATTENUATA, *nob.*, vel forsan sp. nova?

Mar. sept.—In dumetis montis Beni Hosmar prope Tetuan!

Planta nimis immatura, in grege *C. glaucæ* certe collocanda, culmis 2–3 pedalibus, foliis angustissimis subbipedalibus, spicis longis attenuatis insignis. Planta ulterius inquirenda.

Ar. Geog. *C. glauca* in Europa fere omni obvia, in America boreali et in Africa boreali rarius occurrit. Var. *serrulata* in regione Mediterranea haud infrequens.

C. serrulata mihi videtur forma meridionalis *C. glaucæ*. Species genuina in Europa calidiore rarius occurrit.

GRAMINEÆ (*Juss. Gen.* 28).

LEERSIA (*Soland. ap Swartz. Fl. Ind. Occ.* i. 132).

L. HEXANDRA (*Swartz, Prod.* 21; *Kunth, Enum.* i. 6),=L. mauritanica (*Salzm. Exsicc.*; *Steud. Syn. Glum.* i. 2).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Spec. ex herb. Schousboe comm. cel. Cosson!

Ar. Geog. Nonnisi in insula Jamaica et in agro Tingitano ab auctoribus indicata. Ex spec. in Herb. Kew. non satis exploratis videtur species late diffusa.

LYGEUM (*L. Gen.* 31).

L. SPARTUM (*L., Kunth, Enum.* i. 19).

Mar. merid.—In ditione Reraya circ. 1000 m. semel lectum.

Ar. Geog. In regione Mediterranea calidiore, præsertim centrali, satis frequens. In Ægypto et in Marocco rarius occurrit. Deest in Gallia et in Macaronesia.

CRYPSIS (*Ait. Hort. Kew.* i. 48).

C. SCHŒNOIDES (*L.*, sub *Phleo*; *Lam. Ill.* i. 166, tab. 42; *Kunth, Enum* i. 22).

Mar. sept.—(*Salzm. Exsicc.*)! (*Webb Herb.*)!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia). Asia media.

C. ACULEATA (*Ait. Hort. Kew.* i. 48; *Kunth, Enum.* ii. 22; *Schousb. Gew. Marok.* 11).

Mar. sept.—Tanger in arenosis maritimis (*Schsb. l. c.*).

Ar. Geog. Regio Mediterranea (exclusa Macaronesia). Europa media. Sibiria.

ALOPECURUS (*L. Gen.* 78).

A. PRATENSIS (*L., Kunth, Enum.* i. 24), var.,=A. caudicans (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Per hemisphæram borealem temperatam late diffusus.

PHALARIS (*L. Gen.* 74).

P. CANARIENSIS (*L., Kunth, Enum.* i. 31).

Mar. sept.—Tanger (*Salzm., spec. in Herb. Kew.*)! (*Webb Herb.*)!

Ar. Geog. Ex insulis Canariensibus orta sec. auctores; in regione Mediterranea hinc inde subspontanea. In Europa media advena.

P. BRACHYSTACHYS (*Link in Schrad. Journ.* i. pars 3, 134; *Kunth, Enum.* i. 32),=P. quadrivalvis (*Lag. G. et Sp.* 3),=P. nitida (*Presl, Cyp. et Gram. Sic.* 26).

Mar. sept.—Tanger! Tetuan (1851)!

Ar. Geog. Peninsula Iberica. Italia. Marocco. Insulæ Canarienses.

Nisi fallor, hæc species per regionem omnem Mediterraneam late diffusa est. Spec. in herb. nostro in Macedonia a Friwaldsky lectum verisimiliter huc referendum est.

De notis diagnosticis quibus hæc a *P. canariensi* distinguitur, confer Parlatore (Fl. It. i. 69). Ego tamen in spec. nostris video flosculos steriles magnitudine variabiles, et diagnosis mihi incerta manet. Forsan hæc est forma spontanea unde orta est *P. canariensis*, quæ, extra insulas Canarienses, semper culta, vel ex cultura evasa.

P. MINOR (*Retz. Obs.* iii. 8; *Kunth, Enum.* i. 32),=P. aquatica (*Ait. Hort. Kew.* i. 56, *non L.*),=P. bulbosa (*Desf. Fl. Atl.* i. 35; *Schousb. Gew. Marok.* i. 20).

Mar. sept.—Tanger (*Schsb. l. c.*). Tetuan (1851)!

Mar. occid.—Casa Blanca! Prope Mogador!

Mar. merid.—Sat frequens in regione inferiore. Legi prope Aïn Oumast! In irrigatis urbis Marocco! In glareosis Oued en Fisk! et alibi visa!

Ar. Geog. Regio Mediterranea omnis (inclusa Macaronesia). Spontanea etiam, ut fertur, ad prom. B. Spei.

Species valde variabilis: in pinguibus enata, culmi erecti bipedales et ultra, folia latiora, spicæ sat magnæ; in aridis fit multo minor, spicis abbreviatis, culmis plurimis basi subnodosis geniculatis.

P. NODOSA (*L., Kunth, Enum.* i. 32),=P. aquatica (*L. Sp. Pl.* 97, *et Herb., fide Parlatore*),=P. tuberosa (*L. Mant.* 557).

Mar. sept.—Tetuan ad ostium fluminis (1851)!

Mar. occid.—Casa Blanca!

Mar. merid.—Frequens in regione inferiore et ad radices Atlantis Majoris. Sheshaoua! Mesfioua! Sektana! In convalle Aït Mesan usque 1400 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Phalaris cærulescens (*Desf. Fl. Atl.* i. 56; *Kunth, Enum.* i. 32), =P. bulbosa (*Cavan. Icon.* i. tab. 64, *non L., nec Desf.*), = P. tuberosa (*Salzm. Exsicc., non L.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb spec.*)!

Ar. Geog. Regio Mediterranea occidentalis (inclusa Macaronesia).

Notæ diagnosticæ quibus hæc a *P. nodosa* distinguitur mihi videntur instabiles, et re vera hæ species perennes a sp. annuis ejusdem gregis (*P. minor*, Retz., et *P. truncata*, Guss.) structura partium floralium ægre distinguuntur. *P. cærulescens* a *P. nodosa* differt imprimis glumarum ala dorsali dilatata eroso-denticulata, nec angusta integerrima; quoad hanc notam *P. minor* intermedia est secundum cel. Parlatore, qui Gramineas Italicas accurate exposuit. *P. minor* et *P. nodosa* gaudent flosculo sterili minimo solitario, dum in *P. truncato* adsunt flosculi neutri duo, et in *P. cærulescente* omnino desunt. Contra beatus Kunth (Enum. i. Supplem. 23) flosculos neutros duos in *P. cærulescente* vidit, et ego vidi rudimenta bina in spec. *P. nodosæ* ex Mesfioua. Interea *P. cærulescens* post *P. nodosam* sicut subspecies enumeranda videtur.

P. PARADOXA (*L., Kunth, Enum.* i. 33).

Mar. sept.—Tanger! ex regione collina inter Tanger et Tetuan! Tetuan (*Webb Herb.*)! Ad ostium fluminis Tetuanensis (1851)!

Mar. occid.—Casa Blanca!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

HOLCUS (*L. Gen.* 1146).

H. LANATUS (*L., Kunth, Enum.* i. 34).

Mar. sept.—Tanger (*Webb spec.*)! In monte Djebel Kebir!

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Ourika (forma panicula densa, aristis rectis)!

—— ——, var. TUBEROSUS, =H. tuberosus (*Salzm. Exsicc.*).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Legi copiose in altero latere freti Herculis prope S. Roque!

Ab hac varietate vix differt *H. Reuteri* (Boiss., in Boiss. et Reut. Pug. 119).

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa media. America borealis. Var. in dit Tingitana et in Hispania centrali.

H. SETIGLUMIS (*Boiss. et Reut. Diagn. Pl. Nov. Hisp.* No. 5; *Willk. et Lge. Fl. Hisp.* i. 74),=H. annuus (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Hispania centralis. Ditio Tingitana.

ANTHOXANTHUM (*L. Gen.* 42).

A. ODORATUM (*L., Kunth, Enum.* i. 38), var. γ, glumis pubescentibus (*Kunth, l. c.*).

Mar. sept.—Tanger (*Webb Herb.*)! In monte Beni Hosmar pr. Tetuan (ubi hanc var. jam legerat b. Webb)!

Ar. Geog. Species per Europam mediam et Sibiriam late diffusa. In Europa australi et in Africa boreali rarius occurrit. In America boreali forsan introducta.

A. ovatum (*Lag. Gen. et Spec.* 2; *Kunth, Enum.* i. 38),=A. lasianthum (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc. in Herb. Kew.*, sub *A. lasiantho* et *A. ovato*)!

Mar. occid.—Prope Casa Blanca! Crescit copiose prope S. Roque!

—— ——, var. panicula laxiore pauciflora, facie *A. gracili*, Biv., accedens, vix ab *A. Puelii* (Lec. et Lam. Cat. Pl. Auv. 385) diversa.

Mar. sept.—Legi prope Tetuan!

Mar. occid.—Post imbres mensis Maji iterum florens legi juxta Aïn el Hadjar haud procul Mogador!

Ar. Geog. Hispania, ditio Tingitana. *A. Puelii* nascitur in peninsula Iberica et in Gallia media.

A. ovatum indicatur in Sicilia et in Græcia, verisimiliter cum affini, sed satis diverso, *A. gracili*, Biv., commutatum.

Anthoxanthum ovatum ab *A. odorato* statim dignoscitur radice annua, spica abbreviata oblongo-ovata; sed hoc et arcte affine *A. Puelii*, mihi, videntur formæ australes sp. vulgaris Europææ. Radix fibrosa *A. odoratæ* in calidioribus Europæ sæpius æstate exsiccata est; inde proles radice annua donata temperiem meridionalem facilius tolerat. Cæterum radix in *A. ovato* interdum perennans. Haud sine dubio pro subspecie enumeravi.

PANICUM (*L. Gen.* 76).

P. REPENS (*L., Kunth, Enum.* 103; *Schousb. Gew. Marok.* 21),=P. arenarium (*Brot. Phyt. Lus.* tab. 6).

Mar. sept.—Tanger (Schsb. l. c., et spec. ex dono Cosson)! (*Salzm. Exsicc.*)!

Ar. Geog. Species amphigea, in regione omni Mediterranea (exclusa Macaronesia), in Africa australi, et in America subtropica diffusa.

P. CRUS-GALLI (*L., Desf. Fl. Atl.* i. 58),=Oplismenus Crus Galli (*Kunth, Enum.* i. 143).

Mar. sept.—Tanger; vidi mense Junio mox floribundum!

Ar. Geog. Species cosmopolita in temperatis (præsertim calidioribus) orbis totius diffusa.

SETARIA (*Pal. Beauv. Agrost.* 51, tab. 13).

S. VERTICILLATA (*L.*, sub *Panico*; *Pal. Beauv. l. c.*; *Kunth, Enum.* i. 152).

Mar. sept.—Vidi prope Tanger!

Mar. occid.—Mazagan!

Ar. Geog. Species amphigea in regione omni Mediterranea, in Africa australi, in India orientali, et in America boreali diffusa. In Europa media hinc inde occurrit, cum seminibus introducta.

DIGITARIA (*Scop. Fl. Carn.* i. 42).

D. SANGUINALIS (*L.*, sub *Panico*; *Scop. Fl. Carn.* i. 52),=Panicum sanguinale (*Schousb. Gew. Marok.* 21; *Kunth, Enum.* i. 82).

Mar. sept.—In agris et hortis frequens (*Schsb. l. c.*).

Nisi fallor, vidi prope Tanger, sed spec. non servavi!

Ar. Geog. Species cosmopolita in temperatis et regionibus calidioribus orbis fere totius diffusa.

PENNISETUM (*Pal. Beauv. Agrost.* 59, tab. 13).

P. CILIARE (*L.*, sub *Cenchro*; *Link, fide Steud.*),=P. cenchroides (*Rich. in Pers. Syn.* i. 72; *Kunth, Enum.* i. 162),=P. distylum (*Guss. Syn. Fl. Sic.* i. 115),=Cenchrus ciliaris (*Desf. Fl. Atl.* ii. 387; *Schousb. Gew. Marok.* 20),=C. rufescens (*Desf. Fl. Atl.* ii. 388).

Mar. occid.—In arenosis prope Mogador!

Ar. Geog. Species late dispersa, in Africa boreali et australi, in ins. Canariensibus et in Arabia obvia. In Sicilia rarius occurrit. Fertur etiam in America tropica, sed vix genuinum.

PIPTATHERUM (*Pal. Beauv. Agrost.* 18).

P. CÆRULESCENS (*L.*, sub *Milio*; *P. B. l. c.*; *Kunth, Enum.* i. 176),= Milium cærulescens (*Schousb. Gew. Marok.* 22).

Mar. occid.—In monte Djebel Hadid haud procul Mogador! Agadir (*Schsb. l. c.*).

Mar. merid.—Prov. Haha (*Schsb. l. c.*). In regione inferiore Atlantis Majoris haud infrequens. Tasseremout! Supra Amsmiz! Sektana! In convalle Aït Mesan a 1400 m.! usque 2100 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

In spec. nostris rami paniculæ interdum linea scabra notati, et pedicelli undique scabri, aristæ, glumis æquilongæ, vel eas paullo superantes. Pedicelli sæpe incrassati, apice turbinato, ut fit in *P. paradoxo*, var. *Balansæ* (J. Gay in Herb.).

P. MILIACEUM (*L.*, sub *Agrostide*; *Coss. Not. Crit.* 129),=P. multiflorum (*Pal. Beauv. Agrost.* 18; *Kunth, Enum.* i. 177),=Milium multiflorum, *Cavan.*,=Agrostis miliacea (*Schousb. Gew. Marok.* 24). "Undique in maceriis" (*Schsb. l. c.*).

Mar. sept.—Tanger (*Webb Herb.*)! Vidi prope Tetuan!

Mar. occid.—Mogador (*Lowe Cat.*). Aïn el Hadjar haud procul Mogador!

Mar. merid.—Prov. Shedma! Sheshaoua! In umbrosis urbis Marocco! Ourika! Sektana (*J. D. H.*)!

Rarius ludit glumis purpurascentibus.

Ar. Geog. Regio omnis Mediterranea. Fertur etiam in Sibiria, sed forsan erronee; deest in Ledebour, Fl. Rossica.

MACROCHLOA (*Kunth, Gram.* i. 59).

M. TENACISSIMA (*L.*, sub *Stipa*; *Kunth, Enum.* i. 179).

Mar. sept.—Tetuan! (*Webb Herb.*)!

Mar. occid.—Prope Mogador visa! In monte Djebel Hadid (*J. D. H.*)!

Mar. merid.—Ad radices Atlantis Majoris haud infrequens. Reraya! Sektana! Seksaoua! Ex prov. Haha spec. attulerunt Rein et Fritsch!

Ar. Geog. Peninsula Iberica. Africa boreali-occidentalis. Fertur in Attica, sed spec. nulla vidi—an genuina?

In provinciis occidentalibus Imp. Maroccani *M. tenacissima* magna copia ab incolis legitur et in fascias colligata in Angliam ad chartam fabricandam transvehitur.

STIPA (*L. Gen.* 90).

S. ARISTELLA (*L. Syst. Nat.* ed. 12, iii. 229; *Kunth, Enum.* i. 180), =Agrostis bromoides (*L. Mant.* 30; *Schousb. Gew. Marok.* 24), =Aristella bromoides (*Bert. Fl. It.* i. 690).

Mar. sept.—Tanger (*Schsb. l. c.*).

Ar. Geog. Europa Mediterranea. Asia Minor. In Algeria rara.

S. TORTILIS (*Desf. Fl. Atl.* i. 99, tab. 31; *Kunth, Enum.* i. 180).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador (*Lowe Cat.*). Agadir (*Coll. Indig.* 1871)!

Mar. merid.—In saxosis et aridis regionis inferioris ubique occurrit. Prov. Shedma pluries lecta! Tasseremout! Reraya! Sektana!

—— ——, var. PUBESCENS. Foliis utrinque basin versus, cum vagina folii supremi, velutino-pubescentibus.

Mar. merid.—Legimus prope Sektana!

Ar. Geog. Regio omnis Mediterranea præsertim calidior (inclusa Macaronesia). Nascitur etiam ad prom. B. Spei.

S. GIGANTEA (*Lag. Gen. et Spec.* 3; *Kunth, Enum.* i. 180).

Mar. merid.—? Specimen defloratum et fructu jam elapso, ob. formam glumarum fere certe huc referendum, ex convalle Aït Mesan attulerunt cll. Rein et Fritsch!

Ar. Geog. Hispania. Italia meridionalis. Sicilia. Africa borealis.

STIPA PARVIFLORA (*Desf. Fl. Atl.* i. 98, tab. 29 ; *Kunth, Enum.* i. 181).

Mar. merid.—Ad radices Atlantis Majoris. Legimus in ditione Reraya circ. 1200 m. ! In convalle Aït Mesan usque 1400 m.! Taradut (*R. et Fr. spec. in Herb. Kew.*) !

Ar. Geog. Africa borealis. Creta. Hispania.

S. NITENS (*Ball in Journ. Bot.* 1875, 206).

Perennis, dense cæspitosa, foliis rigidis erectis filiformibus, culmo æquilongis, arcte convolutis, extus lævibus, facie interna striatis asperulis, vagina brevi haud inflata, ligula brevissima sub lente fimbriata ; panicula ex ramis brevibus adpressis scabris subcylindracea ; glumæ exteriores inæquales, hyalinæ, nitentes, inferior florem duplo superans basi trinervosa, nervo medio incolori ad apicem producto ; stipes floris solitarii brevis plumosus ; gluma florifera (palea inferior) paleam pluries excedens tenuiter villosa ; arista pro grege brevis (1½-2-pollicaris), medium versus geniculata, infra genu plumoso-barbata, superne nuda scabriuscula.

Mar. merid.—Legimus in regione subalpina Atlantis Majoris in convalle Aït Mesan supra Arround circ. 2200 m. s. m.!

Ex structura partium floralium *S. tortili* valde proxima et pro subspecie a me olim enumerata. Nimis differt tamen radice perenni habitu dense cæspitoso, vagina folii superioris non inflata, aristis dimidio brevioribus. Nullæ aliæ nisi forte *S. compressæ*, R. Br. ex Australia, vel *S. chrysophyllæ*, ex America australi, comparanda videtur.

ARISTIDA (*L. Gen.* 94).

A. ADSCENSIONIS (*L. Sp. Pl.* 121 ; *Kunth, Enum.* 190), = A. gigantea (*L. fil. Suppl.* 121), = A. cærulescens (*Desf. Fl. Atl.* i. 109, tab. 21 ; (*Kunth, l. c.*), = A. canariensis (*Willd. Enum.* 99). *Chætariæ* species (Pal. Beauv., R. et Sch., Nees ab Esenb., Parlatore).

Mar. occid.—Legi juxta Aïn el Hadjar haud procul Mogador !

Mar. merid.—Ad radices Atlantis Majoris haud infrequens. Ourika ! Seksaoua ! Gurguri ! Aïn Tarsil ! et alibi visa !

Ar. Geog. Africa borealis. Ins. Canarienses et Capitis Viridis. Arabia Petræa. Insula Adscensionis. Brasilia. In Europa nonnisi in Hispania australi et in Sicilia detecta.

Statura valde variabilis, interdum planta pumila, sæpe gaudet culmis bipedalibus et ultra.

A. PLUMOSA (*L., Kunth, Enum.* i. 195), = A. lanata (*Forsk. Fl. Arab.-Æg.* 25).

Mar. occid.—In monte Djebel Hadid haud procul Mogador legerunt cll. Rein et Fritsch (*spec. in Herb. Kew.*) !

Mar. merid.—Legimus in ditione Mesfioua !

Ar. Geog. Algeria interior. Marocco. Ægyptus. Asia Mediterranea.

SPOROBOLUS (*R. Br. Prod.* 170).

S. PUNGENS (*Schreb. Gram.* ii. 46, tab. 27, sub *Agrostide*; *Kunth, Enum.* i. 210)!

Mar. sept.—In maritimis pr. Tanger (spec. ex herb. Schousboe benev. comm. cel. Cosson).

—— ——, var. GADITANUS, = S. gaditanus (*Boiss. et Reut. Pug.* 125).

Mar. sept.—"In arenosis maritimis Tingitanis" (*Durand in Herb. Pavon, fide Boiss. et Reut. l. c.*).

Ar. Geog. *S. pungens* in maritimis regionis Mediterraneæ (exclusa Macaronesia) late diffusa est. Var. *gaditanus* nonnisi prope Gades et Tingim detecta.

Ex descriptione *S. gaditanus* differt culmis elatioribus, ligula oblonga, non ad setas reducta. Haud sine dubio pro varietate enumeravi.

AGROSTIS (*L. Gen.* 80).

A. ALBA (*L., Kunth, Enum.* i. 219), var. COARCTATA (*Coss. et Dur. in Expl. Scient. Alger.* 63), = A. maritima, var. pseudopungens (*Lge. Pug.* 31).

Mar. sept.—Tanger (*Salzm. spec. in Herb. Kew.*)! Specimen ex herb. Schousboe comm. Cosson!

Mar. occid.—Mogador (*Lowe Cat.*, sub *A. stoloniferæ*).

—— ——, var. MARITIMA (*Mey. Chlor. Han.* 655), = A. maritima (*Lam. Dict.* i. 61; *Salzm. Exsicc.*)!

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

—— ——, var. FONTANESII (*Coss. et Dur. in Expl. Scient. Alg.* 63), = A. capillaris (*Desf. Fl. Atl.* i. 69, *non* L.), = A. divaricata (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! "In sepibus *Agaves americanæ* prope Tanger" (*spec. ex Herb. Schousboe*)!

Ar. Geog. Species in Europa et Asia temperata, et in regione omni Mediterranea frequens. Var. *Fontanesii* in reg. Mediterranea.

Stirps quam maxime ludibunda, in species plurimas ab auctoribus dilaniata, de quibus amplius disserere hic non fas est. Gramineæ Algerienses, et imprimis *Agrostideæ* et *Avenaceæ*, in Coss. et Dur. 'Expl. Scient. Algérie' eximie tractatæ, lectori assiduo commendandæ.

A. verticillata (*Vill. Dauph.* i. 74; *Schousb. Gew. Marok,* 25), = A. stolonifera (*Kunth, Enum.* i. 219; *Salzm. Exsicc.*; *L. Herb. sec Parlatore, an Sp. Pl.* 93?).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schsb. l. c.*). Tetuan (1851)!

Mar. occid.—Mogador!

Mar. merid.—In irrigatis urbis Marocco! In convalle Aït Mesan circ. 1400 m.!

Ab *A. alba* distinguitur glumis obtusis, glumellis subæqualibus. Pro subspecie, ut videtur, enumeranda.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Ins. Capitis Viridis. Gallia occidentalis.

AGROSTIS CASTELLANA (*Boiss. et Reut. Diagn. Pl. Hisp.* 26; *Willk. et Lge. Fl. Hisp.* i. 53).

Mar. sept.—Specimina ex herb. Schousboe in dumetis prope Cap. Spartel lecta benev. comm. cel. Cosson! Legi in clivo montis Beni Hosmar prope Tetuan *Agrostidem* immaturam viviparam verisimiliter huc referendam!

Legi in collibus prope S. Roque spec. plantæ genuinæ et varietatem floribus majoribus aristis brevioribus in sequentem transeuntem.

—— ——, var. HISPANICA,=A. hispanica (*Boiss. et Reut. Pug.* 120; *Willk. et Lge. l. c.*).

Mar. sept.—Legi mense Junio in monte Djebel Kebir!

Differt ab *A. castellana*, sec. cll. auctores, flosculis majoribus basi non penicillatis et aristis brevioribus; hæ notæ tamen variabiles.

Ar. Geog. Tam species quam varietas in Hispania et in ditione Tingitana occurrunt.

A. olivetorum (Gren. et God. Fl. Fr. iii. 483), species Galliæ australis mihi non satis nota, videtur *A. castellanæ* valde proxima.

A. PALLIDA (*DC. Fl. Fr.* v. 251; *Kunth, Enum.* 221).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! In monte Djebel Kebir!

Mar. occid.—Casa Blanca! In prov. Haha haud procul Mogador!

Ar. Geog. Regio Mediterranea occidentalis (exclusa Macaronesia).

A. SETACEA (*Curt. Fl. Lond.* fasc. vi. tab. 12; *Kunth, Enum.* i. 222).

Mar. sept.—Specimen ex dumetis montis Djebel Kebir a Schousboe lectum comm. cel. Cosson!

Legi in altero latere freti Herculis prope San Roque! Species in Hispania Bætica hucusque non indicata.

Ar. Geog. Species occidentalis ex Anglia usque fretum Herculis dispersa.

GASTRIDIUM (*Pal. Beauv. Agrost.* 21, tab. 6).

G. LENDIGERUM (*L. Sp. Pl.* i. 91, sub *Milio*; *Boiss. Voy. Esp.* 647), =G. australe (*Pal. Beauv. l. c.*; *Kunth, Enum.* i. 230),=Agrostis australis (*L. Mant.* i. 30).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. occid.—In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—Ad radices Atlantis Majoris satis frequens. Seksaoua! Mzouda! et alibi, e. g. prope Mskala, lectum!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa occidentalis. Adest etiam in America australi; an introductum?

POLYPOGON (*Desf. Fl. Atl.* i. 66).

P. MONSPELIENSIS (*L.*, sub *Alopecuro*; *Desf. l. c.*; *Kunth, Enum.* i. 232), = Agrostis panicea (*Willd. Sp. Pl.* i. 128; *Schousb. Gew. Marok.* 24).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schsb. spec. ex. Herb.*)!

Mar. occid.—Mogador! (*Lowe Cat.*). Aïn el Hadjar haud procul Mogador!

Mar. merid.—Satis frequens in regione inferiore, etiam a mari remota. Misra ben Kara! Mesfioua! Sektana! Amsmiz! Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Regio omnis Mediterranea. Europa occidentalis. In America australi (ad Monte Video) forsan introductus.

P. maritimus (*Willd. in Nov. Act. Soc. Nat. Cur. Berol.* iii. 443; *Kunth, Enum.* i. 233).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca!

Præcedenti valde proximus, notæ tamen diagnosticæ subconstantes, et inde pro subspecie enumerandus.

Ar. Geog. Regio omnis Mediterranea. Africa australis. Asia media. India orientalis.

P. subspathaceus, Req., *P. maritimo* valde proxima species, et a viris oculatissimis J. Gay et Cosson semel conjunctus, differt articulo superiore pedicelli latitudinem suam pluries excedente, nec ut in *P. maritimo* et *P. monspeliensi* latitudinem suam subæquante. In planta nostra juxta Casa Blanca lecta video pedicellos intermedios articulo superiore quam latitudo sua duplo longiore. An igitur hæc nota diagnostica fallax?

LAGURUS (*L. Gen.* 104).

Genus a cl. Kunth inter *Avenaceas* perperam collocatum, certe inter *Agrostideas* enumerandum.

L. OVATUS (*L.*, *Kunth, Enum.* i. 295; *Schousb. Gew. Marok.* 34).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*).

Mar. occid.—Casa Blanca! Mogador (*Lowe Cat.*).

Mar. merid.—Satis frequens in regione inferiore. Sektana! Seksaoua! et alibi pluries visus!

Ar. Geog. Regio omnis Mediterranea. In Europa occidentali rarius occurrit.

AMMOPHILA (*Host, Gram. Austr.* iv. 24).

A. ARENARIA (*L.*, sub *Arundine*; *Link, Enum. H. Berol.* i. 105), = A. arundinacea (*Host, l. c.*; *Kunth, Enum.* i. 245).

Mar. sept.—In arenosis litoris Atlantici a prom. Spartel meridiem versus!

Ar. Geog. Frequens in maritimis Europæ septentrionalis et occidentalis. Per litora Mediterranea dispersa, sed minus frequens. Nascitur in America boreali, sed deest in Macaronesia.

ARUNDO (*L. Gen.* 93).

A. DONAX (*L., Kunth, Enum.* i. 246; *Schousb. Gew. Marok.* 34).

Per territorium omne Maroccanum nobis notum ab incolis cultum. Schousboe non vidit spontaneam. In regione inferiore et ad radices Atlantis Minoris pluries vidimus nondum florentem in locis a cultura remotis subspontaneam.

Ar. Geog. Species verisimiliter ex Africa boreali subtropica orta, et inde in temperatas calidiores orbis veteris advecta, in regione Mediterranea sæpe subspontanea.

A. PLINIANA (*Turra, Fl. It. Prod.* i. 63; *Parlat. Fl. It.* i. 218),=A. mauritanica (*Desf. Fl. Atl.* i. 106; *Salzm. Exsicc.*; *Kunth, Enum.* i. 246).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Ar. Geog. Regio Mediterranea imprimis calidior (exclusa Macaronesia).

AMPELODESMOS (*Link, Hort. Reg. Berol.* i. 136).

A. TENAX (*Link, l. c.*; *Kunth, Enum.* i. 249),=Arundo Ampelodesmos (*Cyr. Pl. rar. Neap.* fasc. ii. 30),=A. festucoides (*Desf. Fl. Atl.* i. 108).

Mar. sept.—Vidi prope Tanger nondum florentem, sed foliis facile dignoscendum. Spec. fructiferum ex herb. Schousboe comm. cel. Cosson!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia). Ex Oriente non vidi specimina.

PHRAGMITES (*Trin. Fund. Agrost.* 134).

P. COMMUNIS (*Trin. l. c.*; *Kunth, Enum.* i. 251),=Arundo Phragmites (*L. Sp. Pl.* 120).

Mar. merid.—In convalle Aït Mesan circ. ad 1400 m. legimus nondum florentem culmis et paniculis exsiccatis anni præcedentis!

Ar. Geog. Species cosmopolita in temperatis totius orbis diffusa. Ex Macaronesia non vidi.

ECHINARIA (*Desf. Fl. Atl.* ii. 385).

E. CAPITATA (*L.*, sub *Cenchro*; *Desf. l. c.*; *Kunth, Enum.* i. 257).

Mar. merid.—In regione inferiore et media Atlantis Majoris. In convalle Aït Mesan circ. 1400 m., et iterum supra Arround ad 2200 m.! In monte Djebel Tezah circ. 2000 m.!

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia).

CYNODON (*Rich. in Pers. Syn.* i. 85).

C. DACTYLON (*Rich. l. c.*; *Kunth, Enum.* i. 259), = Panicum Dactylon (*L., Schousb. Gew. Marok.* 21).

"In arvis totius imperii frequentissime occurrit" (*Schsb. l. c.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. occid.—Casa Blanca! Mazagan! Mogador (*Lowe Cat.*)!

Mar. merid.—Occurrit, sed minus frequens, in terris interioribus. Legimus prope Sheshaoua! et pluries alibi vidimus. Ourika (*R. et Fr. spec. in Herb. Kew.*)!

Ar. Geog. Species cosmopolita, in temperatis et calidioribus orbis totius diffusa.

SPARTINA (*Schreb. in L. Gen. Pl.* i. 43).

S. STRICTA (*Roth, Catal. Bot.* iii. 9; *Kunth, Enum.* i. 278), = Lim. pungens (*Pers. Syn.* i. 72; *Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Spec. ex Herb. Schousboe*)!

Ar. Geog. Europa occidentalis. Hispania Gaditana. Litora maris Adriatici. Ditio Tingitana.

AIRA (*L. Gen.* 81).

A. CARYOPHYLLEA (*L., Kunth, Enum.* i. 289), var. α (*Coss. in Expl. Scient. Alg.* 95).

Mar. sept.—Tanger (*Salzm. Exsicc.*)!

Mar. merid.—In regione media Atlantis Majoris. In convalle Amsmiz circ. 1600 m.! In monte Djebel Tezah usque 2200 m.!

—— ——, var. β, MICROSTACHYA (*Coss. l. c.*).

Mar. sept.—Tanger (*Webb spec.*)! Tetuan in saxosis!

Mar. merid.—Ad radices Atlantis Majoris in ditione Reraya (*J. D. H.*)!

—— ——, var. CUPANIANA (*Coss. l. c.*), = A. Cupaniana (*Guss. Syn. Fl. Sic.* i. 145).

Mar. occid.—Legi in prov. Haha haud procul Mogador!

Ar. Geog. Species amphigea. In Europa et Asia media, in regione omni Mediterranea, necnon in Africa australi et in America meridionali obvia. Varietates enumeratæ in regione Mediterranea occurrunt.

A. CAPILLARIS (*Host, Gram. Austr.* iv. 20), = A. elegans (*Gaud. Agrost. Helv.* i. 130; *Kunth, Enum.* i. 289).

Mar. sept.—Tanger (*Salzm. spec. in Herb. Kew.*)!

Ar. Geog. In Europa australi fere omni. Ex Algeria non vidi. Deest, ut videtur, in Asia Mediterranea.

AIROPSIS (*Pal. Beauv. Agrost.* 71, tab. 14).

A. MINUTA (*Lœfl. It. Hisp.*, sub *Aira*; *Desv. in R. et Sch. Syst.* ii. 578), =Catabrosa minuta (*Trin. Fund. Agrost.* 136; *Kunth, Enum.* i. 370), =Moliniera minuta (*Parlat. Fl. It.* 237).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Ar. Geog. Peninsula Iberica. Ditione Tingitana. Italia. Græcia. Persia.

TRISETUM (*Pers. Syn.* i. 97).

T. PANICEUM (*Lam. Ill.* 202, sub *Avena*; *Pers. l. c.*), =T. neglectum (*R. et Sch. Syst.* ii. 660; *Kunth, Enum.* 296).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Spec. ex Herb. Schousboe*)!

Mar. occid.—Casa Blanca! Mazagan! In provincia Haha prope Mogador!

Mar. merid.—In regione inferiore vulgatissimum, sed vix supra 900 m. s. m., nec in convallibus interioribus se protendit. Shedma! Aïn Oumast in saxosis aridissimis! Sheshaoua! Misra ben Kara! Mesfioua! Mzouda! Mskala!

Ludit panicula contracta facie fere *Kœleriæ phleoidis.*

Ar. Geog. In regione Mediterranea occidentali (inclusa Macaronesia) late diffusa.

T. PUMILUM (*Desf. Fl. Atl.* i. 103, sub *Avena*; *Kunth, Enum.* i. 297).

Mar. occid.—Legi in arenosis maritimis prope Mogador mense Aprili jam defloratum!

Ar. Geog. Species, sec. cel. Cosson, late diffusa per Africam borealem usque Arabiam et Persiam. Occurrit etiam in Hispania austro-orientali, in insulis Canariensibus et ad prom. B. Spei.

T. FLAVESCENS (*L.*, sub *Avena*; *Pal. Beauv. Agrost.* 88, tab. 18; *Kunth, Enum.* i. 298).

Mar. merid.—In regione inferiore Atlantis Majoris. In convalle Aït Mesan! in monte supra Seksaoua!

Planta nostra vaginis villoso-pubescentibus fere media est inter typum Linnæanum et *T. velutinum* (Boiss. Voy. 653, tab. 174).

Ar. Geog. Species in temperatis frigidioribus hemisphæræ borealis late diffusa; in calidioribus fit rarior.

GAUDINIA (*Pal. Beauv. Agrost.* 97, tab. 19).

G. FRAGILIS (*L.*, sub *Avena*; *Pal. Beauv. l. c.*; *et auctt. plurim.*), = Avena fragilis (*Kunth, Enum.* i. 303; *Schousb. Gew. Marok.* 34).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schsb. l. c.*).

Mar. occid.—Casa Blanca! Mogador!

Mar. merid—Ourika! Sektana!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

AVENA (*L. Gen.* 91).

A. SATIVA (*L., Kunth, Enum.* i. 301).
Mar. occid.—In arenosis multis prope Mogador!
Mar. merid.—Shedma! Misra ben Kara!
E cultura evasa hodie subspontanea.
Ar. Geog. De patria *A. sativæ* hic disserere non oportet.

A. STERILIS (*L., Kunth, Enum.* i. 303; *Schousb. Gew. Marok.* 33).
"In agris et aggeribus haud raro" (*Schsb. l. c.*).
Mar. occid.—Casa Blanca!
Mar. merid.—Reraya! Sektana!
Ar. Geog. In regione Mediterranea (inclusa Macaronesia) verisimiliter spontanea. In Europam mediam cum seminibus introducta.

A. BARBATA (*Brot. Fl. Lus.* i. 108; *Willk. et Lge. Fl. Hisp.* i. 68),= A. hirsuta (*Roth, Catal. Bot.* iii. 19; *Kunth, Enum.* i. 302),=A. fatua (*Salzm. Exsicc., non L.*).
Mar. sept.—Tanger (*Salzm. Exsicc.*)! Inter Tetuan et Ceuta!
Mar. occid.—In monte Djebel Hadid haud procul Mogador!
Mar. merid.—Satis frequens in regione inferiore et ad radices Atlantis Majoris. Prov. Shedma! Aïn Oumast! Mesfioua! Tasseremout! Sektana (*R. et Fr. spec. in Herb. Kew.*)!
In aridis prov. Shedma ludit multiculmis, culmis brevioribus, glumella inferiore insigniter nervosa (*A. deusta*, nob, olim. in Herb.).
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Etiam in Gallia occidentali obvia.

—— ——, var.? Panicula ramosa diffusa, glumella inferiore longe bisetosa.
Mar. occid.—Casa Blanca!
Fere media inter *A. barbatam* et *A. longiglumem* (Dur. in Duch. Rev. Bot. i. 359). Hæc differt glumis longioribus, sed mihi videtur nimis proxima *A. barbatæ*.

A. PRATENSIS (*L., Kunth, Enum.* i. 300).
Mar. sept.—Prope Tetuan!
Ar. Geog. Europa media; in regione Mediterranea hinc inde rarius occurrit. Deest in Macaronesia.
A subspecie sequente differt imprimis rachi pilosa.

A. bromoides (*Gouan, Hort. Monsp.* 52; *Willk. et Lge. Fl. Hisp.* i. 69)
Var. α, GENUINA, *Willk. l. c.*,=A. australis (*Parl. Fl. It.* i. 285).
Mar. merid.—In ditione Reraya! Occurrit lusus foliis rigidis subconvolutis, vaginis cum culmo scabris in rupibus supra Seksaoua!
Var. β, MICROSTACHYA, *Willk.*
Mar. merid.—Mesfioua! Milhaïn! Seksaoua!

A. bromoides mihi videtur proles australis *O. pratensis*, et sicut subspecies enumeranda.

Ar. Geog. Regio Mediterranea (exclusa Macaronesia). Ex Oriente non vidi. Var. *microstachya* nonn si in Hispania indicatur.

ARRHENATHERUM (*Pal. Beauv. Agrost.* 55, tab. 11).

A. ELATIUS (*M. K. Deutschl. Fl.* i. 546; *Parl. Fl. It.* i. 293), = A. avenaceum (*Pal. Beauv. l. c.*; *Kunth, Enum.* i. 307), = Avena elatior (*L., Desf. Fl. Atl.* i. 100).

Mar. merid.—In convalle Amsmiz!

Ar. Geog. Europa media. Regio omnis Mediterranea (inclusa Macaronesia).

POA (*L. Gen.* 83).

P. ANNUA (*L., Kunth, Enum.* i. 349).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! Cap. Spartel!

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In regione inferiore, et in Atlante Majore usque reg. subalpinam. In ruderatis urbis Marocco! Ourika! Sektana! In convalle Amsmiz usque 1500 m. s. m.! In convalle Aït Mesan usque in ascensum jugi Tagherot circ. 2700 m.!

Ar. Geog. Species cosmopolita per orbem fere totum diffusa.

P. BULBOSA (*L., Kunth, Enum.* i. 352).

Mar. sept.—Inter Tanger et Tetuan! Tetuan (*Webb Herb.*)! In monte Beni Hosmar!

Mar. merid.—Ad radices Atlantis Majoris, unde in regionem alpinam ascendit. Ourika! In convalle Aït Mesau et in ascensu jugi Tagherot usque 2800 m.! In monte Djebel Tezah usque 2900 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa et Asia media.

P. TRIVIALIS (*L., Kunth, Enum.* i. 352).

Mar. sept.—Tanger!

Mar. merid.—Ourika! In convalle Aït Mesan circ. 1400 m.! et iterum circ. 2100 m.!

Ar. Geog. In temperatis hemisphæræ omnis borealis. In Macaronesia non deest.

P. PRATENSIS (*L., Kunth, Enum.* i. 352).

Mar. merid.—In regione inferiore et media Atlantis Majoris. In convalle Aït Mesan usque 2100 m.! In convalle Amsmiz 1400–1600 m.! In monte Djebel Tezah usque 2400 m.!

Ar. Geog. Europa et Asia temperata. In montosis regionis Mediterraneæ calidioris infrequens. Deest in Macaronesia. Ex Hispania meridionali non vidi, nex ex Algeria.

POA COMPRESSA (*L., Kunth, Enum.* i. 355; *Schousb. Gew. Marok.* 26).
Mar. sept.—"In pratis siccis regionis Tingitanæ raro occurrit" (*Schsb. l. c.*).
Ar. Geog. Species in temperatis hemisphæræ borealis late diffusa. Deest in Macaronesia.

GLYCERIA (*R. Br. Prod.* 179).

G. FLUITANS (*R. Br. l. c.*; *Kunth, Enum.* i. 367),=Festuca fluitans, *L.*,=Poa fluitans (*Scop. Fl. Carn.* 106).
Mar. sept.—Tanger (specimen typo Linnæano conforme)!
Ar. Geog. Species fere cosmopolita, in Europa omni, in regione Mediterranea, in utraque America et in Australia diffusa. Ex Macaronesia non vidi.

—— ——, var. PLICATA, *Griseb.*,=G. plicata (*Fries, Mant.* iii. 176; *Koch, Syn. Fl. Germ.* ed. 2, 932).
Mar. sept.—Præcedenti magis frequens. Tanger (*J. D. H.*)!
Mar. merid.—Legimus prope Ourika!
Ar. Geog. Europa fere omnis. Africa borealis.
Hæc et G. *spicata* (Guss. Syn. Fl. Sic. ii. 784) notis diagnosticis ad speciem delimitandum idoneis non carent; characteres tamen variabiles sunt, et ambo, monente cel. Cosson, pro varietatibus enumerandæ.

G. DISTANS (*L.*, sub *Poa*; *Wahlenb. Fl. Upsal.* 36; *Rchb. Icon. Fl. Germ.* fig. 1609),=Festuca distans (*Kunth, Enum.* i. 393),=Atropis distans (*Griseb. in Led. Fl. Ross.* iv. 388; *Coss. in Expl. Scient. Alg.* 139),=Puccinellia distans (*Parlat. Fl. It.* i. 367), var. FESTUCÆFORMIS (*Coss. l. c.*),=G. festucæformis (*Heynh. in Rchb. Fl. Excurs.* i. 45).
Mar. sept.—Tanger (spec. mancum)! (Specimen ex herb. Schousboe benev. comm. Cosson)!

—— ——, var. TENUIFOLIA (*Coss. l. c.*),=G. tenuifolia (*Boiss. et Reut. Pug.* 127, *non Presl*),=G. leptophylla (*Steud. Syn. Pl. Glum.* i. 286).
Mar. sept.—Prope Tanger (*Webb spec.*)!
Ar. Geog. Species variabilis per Europam et Asiam mediam et regionem Mediterraneam diffusa. Var. *tenuifolia* in Hispania et in Africa boreali.

BRIZA (*L. Gen.* 84).

B. MAXIMA (*L., Kunth, Enum.* i. 371; *Schousb. Gew. Marok.* 27).
Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Schsb. l. c.*). In monte Djebel Kebir! Tetuan (1851)! (*Webb Herb.*)!
Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In dit. Maroccana infrequens. Obvia etiam in Africa australi, et in India orientali.

Briza minor (*L., Kunth, Enum.* 372),=B. virens (*L., Kunth, l. c.; Schousb. Gew. Marok.* 26).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb spec.*) ! (*Schsb. l. c.*). In monte Djebel Kebir!

Mar. merid.—In ditione Mesfioua!

Ar. Geog. Species amphigea, per regionem Mediterraneam omnem diffusa. In Africa australi, America meridionali, et in insula Mauritii obvia.

MELICA (*L. Gen.* 82).

M. minuta (*L., Kunth, Enum.* i. 376),=M. pyramidalis (*Poir. Voy.* ii. 95; *Schousb. Gew. Marok.* 25; *Coss. in Expl. Scient. Alg.* 136).

Mar. sept.—Tanger! ("In fruticetis rarissime occurrit," *Schsb. l. c.*) (*Salzm. Exsicc.*)! In rupibus prope Tetuan! In monte Beni Hosmar!

—— ——, var. **latifolia** (*Coss. l. c.* 137),=M. major (*Parlat. Fl. It.* i. 306; *Willk. et Lge. Fl. Hisp.* i. 84; *an Sibth. et Sm. Fl. Gr. Prod.* i. 51?),=M. pyramidalis (*Bert. Amœn. It.* 329, *non Poir.*),= M. arrecta (*Kunze; Chlor. Hisp.* No. 621 *a*).

Mar. sept.—Tanger (*Webb spec.*)! In monte Djebel Kebir! In regione collina inter Tanger et Tetuan! Prope Tetuan (1851)!

Ar. Geog. Tam species quam varietas per regionem Mediterraneam (exclusa Macaronesia) late diffusæ sunt.

Stirps variabilis, ab auctoribus diu vexata, et in species plurimas ægre extricandas dilaniata. Genus omne a cel. Cosson optime illustratum.

M. ciliata (*L., Kunth, Enum.* i. 375; *Coss. in Expl. Scient. Alg.* 133).

Mar. merid.—In regione inferiore videtur potius frequens. Legimus in prov. Shedma! prope Sektana! et in rupibus supra Seksaoua!

Spec. supra Seksaoua lecta proxime accedunt *M. nebrodensi* (Parlat. Fl. Palerm. 1, 120). Hanc tamen, duce cel. Cosson, habeo pro forma rupestri *M. ciliatæ*.

—— ——, var. **major**, thyrso lobato,=M. Magnolii (*Gren. et Godr. Fl. Fr.* iii. 550).

Mar. sept.—Legi prope Tanger mense Junio! Prope Tetuan (1851)!

Mar. occid.—In prov. Haha haud procul Mogador!

Mar. merid.—In convalle Aït Mesan circ. 1400 m.!

Ar. Geog. Species variabilis per regionem fere omnem Mediterraneam (inclusa Macaronesia) late diffusa. Occurrit etiam in Europa media et in Sibiria. Var. *major* in reg. Mediterranea hinc inde occurrit.

M. Cupani (*Guss. Pr. Fl. Sic. Suppl.* 17; *Coss. in Expl. Scient. Alg.* 134).

Mar. merid.—In rupibus prope Seksaoua! et Milhaïn!

—— ——, var. MINOR, foliis brevioribus rigidis subdistichis, = M. humilis (*Boiss. Voy. Esp.* 662, tab. 177).

Mar. merid.—In regione inferiori et media Atlantis Majoris. In convalle Aït Mesan a 1600 m. usque 2300 m.! In convalle Amsmiz usque in clivo montis Djebel Tezah (1500–1800 m.)!

Ar. Geog. Species, ut videtur, per regionem Mediterraneam calidiorem ex Imp. Maroccano per Africam borealem, Hispaniam, Siciliam, Asiam Minorem, Syriam, et Persiam usque in montes Himalaya diffusa. Vidi specimen ex Aghanistan in Herb. Kew., nec satis differt *M. Jacquemonti*, Decaisne. Var. nostra in Hispania et in Atlante.

M. Cupani a *M. ciliata* præcipue distinguitur glumella inferiore flosculi inferioris in quavis spicula dorso undique dense pilosa, nec tantum margine ciliata. Nota equidem non gravis, sed mihi videtur bene distincta species.

KŒLERIA (*Pers. Syn.* i. 97).

K. VILLOSA (*Pers. l. c.*; *Kunth, Enum.* i. 382, *et plurim. auct.*), = K. pubescens (*Pal. Beauv.*; *Coss. Expl. Scient. Alger.*), = Alopecurus litoreus (*All. Fl. Ped.* ii. 235), = Aira pubescens (*Vahl, Symb.* iii. 9), var. LONGEARISTATA (*Coss. l. c.*), = K. hispida (*Salzm. Exsicc.*, *non DC.*), = K. Webbiana (*Parlat. in Giorn. Bot. Ital.* ii. 376), = K. Salzmanni (*Boiss. in Boiss. et Reut. Pug.* 123).

Mar. sept.—Tanger (*Webb spec.*)! Ex monte Djebel Kebir (spec. ex herb. Schousboe comm. cel. Cosson)!

Ar. Geog. Species per regionem Mediterraneam imprimis centralem dispersa. Deest in Macaronesia. Varietatem nonnisi ex agro Tingitana vidi.

Cel. Cosson nomen triviale *pubescens* antiquiori *villosa* prætulit; nomen tamen Allionii prioritatis jure gaudet, sed nolui mutare nomen ab auctoribus præcipuis acceptum.

K. PHLEOIDES (*Vill. Dauph.* ii. 95, tab. 2, sub *Festuca*; *Pers. Syn.* i. 97; *Kunth, Enum.* i. 383), = K. aristata (*Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! Inter Tanger et Tetuan!

Mar. occid.—Prope Mogador!

Mar. merid.—Frequens in regione inferiore. Prov. Shedma! Misra ben Kara! In ruderatis urbis Marocco! Mesfioua! Ourika!

—— ——, var. SUBMUTICA, *nob.* Glumella inferiore puberula submutica, vel breviter aristulata, glumella flosculi superioris dorso recurva. Refert *K. berytheam*, Boiss. et Blanche.

Mar. merid.—Legi prope Amsmiz!

Ar. Geog. Species in regione Mediterranea (inclusa Macaronesia) late diffusa.

SCHISMUS (*Pal. Beauv. Agrost.* 74).

S. CALYCINUS (*L.*, sub *Festuca*; *Coss. in Expl. Scient. Alg.* 138), = S. marginatus (*Pal. Beauv. l. c.*; *Kunth, Enum.* i. 385).

Mar. occid.—Prope Mogador (*Lowe Cat.*).

Mar. merid.—Prov. Shedma! In planitie prope urbem Marocco! Prov. Mtouga!

Ar. Geog. Species per regionem Mediterraneam dispersa. Deest in Italia et in Macaronesia.

DACTYLIS (*L. Gen.* 86).

D. GLOMERATA (*L.*, *Kunth, Enum.* i. 386).

Mar. occid.—Casa Blanca (spec. typo Europæo conforme)!

—— ——, var. AUSTRALIS (*Willk. et Lge. Fl. Hisp.* i. 88), = D. hispanica (*Roth, Catal. Bot.* i. 8; *Kunth, l. c.*).

Mar. sept.—Tanger (*Webb spec.*)!

Mar. occid.—Casa Blanca (*J. D. H.*)!

Mar. merid.—Satis frequens in regione inferiore et in Atlante Majore. Prov. Shedma! Amsmiz! Ourika (*J. D. H.*)! Seksaoua! In convalle Aït Mesan usque 2400 m. s. m.!

—— ——, var. JUNCINELLA (*Boiss. Voy. Esp.* 665), = D. juncinella, *Bory.*

Mar. merid.—In regione media Atlantis Majoris. In convalle Aït Mesan circ. 1500 m.! In monte Djebel Tezah circ. 2000 m.!

Spica in spec. nostris valde diminuta; nisi vidissem spec. Hispanica intermedia pro sp. diversa habuerim.

Ar. Geog. Species per hemisphæram borealem late diffusa. Var. *australis* in calidioribus frequens; var. *juncinella* in montanis Hispaniæ et Africæ borealis.

CYNOSURUS (*L. Gen.* 87).

C. ECHINATUS (*L.*, *Kunth, Enum.* i. 388; *Schousb. Gew. Marok.* 27).

Mar. sept.—Tanger (*Webb Herb.*)! (*Schsb. l. c.*).

Ar. Geog. Species in regione Mediterranea (inclusa Macaronesia) late diffusa, etiamsi in territorio nostro rara videtur. Occurrit in calidioribus Europæ mediæ, et indicatur ad promont. B. Spei, et ad Monte Video, sed verisimiliter ex Europa allata.

C. ELEGANS (*Desf. Fl. Atl.* i. 82, tab. 17; *Kunth, Enum.* i. 389), = C. polybracteatus (*Willk. et Lge. Fl. Hisp.* i. 90, *non Poir.*).

Mar. merid.—In regione inferiore et media Atlantis Majoris. In ditione Reraya ad 1100 m.! In convalle Amsmiz et in clivo montis Djebel Tezah usque 2200 m.!

Ar. Geog. Regio fere omnis Mediterranea (inclusa Macaronesia).

Monente cel. Cosson *C. polybracteatus*, Poir. Voy. ii. 97, est species a *C. elegante* probe diversa paucis cognita.

CYNOSURUS AUREUS (*L., Desf. Fl. Atl.* i. 83; *Willk. et Lge. Fl. Hisp.* i. 90; *Schousb. Gew. Marok.* 27),=Lamarckia aurea (*Mœnch, Method.* 201; *Kunth, Enum.* i. 389).

"In saxosis per totum imperium" (*Schsb. l. c.*).

Mar. sept.—Tetuan!

Mar. occid.—Aïn el Hadjar haud procul Mogador (*J. D. H.*)!

Mar. merid.—In regione inferiore satis frequens. Aïn Oumast! Mskala! Seksaoua! Amsmiz!

Ar. Geog. Regio Mediterranea (inclusa Macaronesia).

FESTUCA (*L. Gen.* 88).

F. MEMPHITICA (*Spreng. Hort. Hal. Add.* i. 20, sub *Dactylide*; *Coss. Not. Crit.* 183),=F. divaricata (*Clem., fide Willk.*; *Kunth, Enum.* i. 392, *pro parte, non Desf.*),=Scleropoa memphitica (*Parlat. Fl. It.* i. 471),=Cutandia scleropoides (*Willk. in Bot. Zeit.* 1860, 130), genus pessimum.

Mar. occid.—Legimus in arenosis prope Mogador!

Ar. Geog. Species per regionem desertorum ex Arabia usque Algeriam Saharensem diffusa, inde per Bithyniam et Transcaucasiam dispersa. Habitat insuper in Hispania australi ad Cabo de Gata, et in plaga Mogadorensi.

F. MARITIMA (*DC. Fl. Fr.* iii. 47; *Kunth, Enum.* i. 392),=Triticum maritimum (*L., et auct. plurim.*).

Mar. sept.—Tanger! (spec. ex herb. Schousboe comm. cel Cosson)!

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia). Ex Oriente non vidi.

F. RIGIDA (*L.*, sub *Poa*; *Kunth, Enum.* i. 392).

Mar. sept.—Tanger! Inter Tetuan et Ceuta!

Mar. occid.—Casa Blanca!

Mar. merid.—Valde frequens in planitie et in regione inferiore Atlantis Majoris. Aïn Oumast! Misra ben Kara! Mesfioua! Reraya! In convalle Aït Mesan usque 1400 m.!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). Europa occidentalis.

F. hemipoa (*Del. in Spreng. Syst. Veg.* iv. pars 2, 36; *Kunth, Enum.* i. 411),=Scleropoa hemipoa (*Parlat. Fl. It.* i. 472),=F. rigida, var. hemipoa (*Coss. in Expl. Scient. Alg.* 182).

Mar. occid.—Legimus in arenosis prope Mogador.

Pace cel. Cosson hæc stirps, præcedenti valde proxima, differt tamen notis satis stabilibus, et mihi videtur sicut subspecies enumeranda.

Ar. Geog. Africa boreali-occidentalis. Gallia australis; Italia.

F. TUBERCULOSA (*Moris in Atti terz. Riun. Sc. Ital.* 489, sub *Catapodio*; *Coss. in Expl. Scient. Alg.* 189, tab. 41),=Castellia tuberculata (*Tineo, Pl. rar. Sic.* fasc. ii. 18; *Parlat. Fl. It.* i. 480).

Mar. merid.—Legi in planitie Maroccana prope Sheshaoua!

Ar. Geog. Species in Africa boreali-occidentali, in Siciliæ insula Linosa, et in Sardinia, ubique rara.

Festuca unilateralis (*Schrad. Cat. Gött.* 1814; *Kunth, Enum.* i. i. 395), var. **aristata**, = F. tenuiflora (*Schrad. Fl. Germ.* i. 345; *Kunth, l. c.*), = Nardurus unilateralis, var. aristatus (*Boiss. Voy. Esp.* 667), = Triticum Nardus (*DC. Fl. Fr.* iii. 87).

Mar. merid.—Legi in convalle Aït Mesan circ. 1300 m. s. m. lusus spiculis glabris et pilosis semel crescentes!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia).

F. bromoides (*L., Coss. in Expl. Scient. Alg.* 172; *Schousb. Gew. Marok.* 27), = F. uniglumis (*Soland. in Ait. Hort. Kew.* i. 108; *Kunth, Enum.* i. 196), = Vulpia membranacea (*Link, Hort. Berol.* i. 147).

Mar. sept.—Tanger!

Ar. Geog. Europa occidentalis. Regio Mediterranea fere omnis (exclusa Macaronesia).

F. Alopecurus (*Schousb. Gew. Marok.* 28; *Kunth, Enum.* i. 397).

Mar. sept.—Tanger! (*Schsb. l. c., spec. comm. Cosson*)! (*Webb spec.*)! (*Salzm. Exsicc.*)! Ad ostium fluminis Tetuanesis!

Mar. occid.—Casa Blanca! Mazagan! Aïn el Hadjar haud procul Mogador!

Ar. Geog. Marocco. Hispania. Italia occidentalis. Fertur etiam in Græcia, sed spec. non vîdi.

Præcedenti structura proxime affinis; sed glumæ semper majores pluries latiores. Species valde ludibunda, cujus varietates plurimæ in Willk. et Lge. Fl. Hisp. i. 92, enumerantur.

Inter specimina plurima juxta Mazagan lecta video nonnulla glumellis minute scabris, nec ciliatis; et juxta Aïn el Hadjar legi specimen glumellis undique villosis, aristis brevissimis.

F. Myurus (*L., Kunth, Enum.* i. 396), = Vulpia Myurus (*Gmel. Fl. Bad.* i. 8).

Mar. sept.—Juxta Tetuan!

—— ——, var. **sciuroides**, = F. sciuroides (*Roth, Catal. Bot.* ii. 11), = F. bromoides (*Kunth, Enum.* i. 396, *et auct. plurim., non L.*).

Mar. sept.—Tanger (*Webb Herb.*)!

Mar. occid.—Mogador (*Lowe Cat.*).

—— ——, var. **Broteri**, = Vulpia Broteri (*Boiss. et Reut. Pug.* 128), = Vulpia sciuroides, var. longearistata (*Willk. et Lge. Fl. Hisp.* i. 91).

Mar. sept.—Inter Tetuan et Ceuta!

Ar. Geog. Species valde ludibunda; forma cum typica cum var. *sciuroide* in Europa media et in regione omni Mediterranea. Fertur etiam in America boreali et ad prom. B. Spei. Var. *Broteri* per regionem Mediterraneam diffusa.

Festuca ciliata (*Danth. in DC. Fl. Fr.* iii. 55; *Kunth, Enum.* i. 396), =F. Myurus, var. γ (*Coss. in Expl. Scient. Alg.* 175).

Mar. merid.—Prope Seksaoua!

Ar. Geog. Stirps verisimiliter regionis Mediterraneæ propria. Fertur in Europa media sed spec. genuina non vidi.

Planta *F. Myurus* valde proxima; sed videtur satis constans, nec vidi formas intermedias. Pro subspecie enumeravi.

F. GENICULATA (*L.*, sub *Bromo*; *Willd. Enum.* i. 118),=F. stipoides (*Desf., pro parte*; *Salzm. Exsicc.*).

Occurrit frequentissime in omni territorio Maroccano nobis noto.

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (spec. ex Herb. Schousboe)! In Monte Djebel Kebir!

Mar. occid.—Legi prope Casa Blanca lusum aristis longioribus (*Vulpia attenuata,* Parlat. Fl. Palerm. i. 195)!

Mar. merid.—Fere ubique in regione inferiori, usque in regionem mediam Atlantis Majoris ascendens. Mesfioua! Ourika! Reraya! Seksaoua! In convalle Amsmiz usque 2000 m. s. m.! In monte Djebel Tezah circ. 1900 m.!

—— ——, var. PUMILA, *nob.* Planta pumila multiculmis, subcæspitosa; panicula contracta ramis abbreviatis; gluma inferior superiore tertia parte brevior; glumella inferior latior abrupte in aristam brevem contracta, superior bicarinata, carinis viridibus scabris vel breviter pilosulis. Confer var. *confertam,* Coss. Pl. Crit. 48. Nostra tamen notis indicatis a typo longius recedit.

Mar. occid.—Legimus prope Mogador! et in prov. Haha finitima! et juxta Aïn el Hadjar.

Mar. merid. —Satis frequens in aridis regionis inferioris. Legimus prope Aïn Oumast! In convalle Amsmiz! Juxta Aïn Tarsil!

Specimen ex convalle Amsmiz panicula subsecunda ramis divaricatis rigidiusculis refert *F. delicatulam,* Lagasca. Planta ad Aïn Tarsil lecta panicula valde attenuata, glumis paullo longioribus, propior videtur *F. Myurus,* sed mihi potius ad hanc varietatem *F. geniculatæ* referenda videtur.

Ar. Geog. F. geniculata per regionem Mediterraneam occidentalem late diffusa, deest in Oriente et in Macaronesia.

F. DURIUSCULA (*L., Kunth, Enum.* i. 399), var. INDIGESTA (*Boiss. Voy. Esp.* 671),=F. indigesta (*Boiss. El.* 64; *Wilk. et Lge. Fl. Hisp.* i. 94).

Mar. merid.—In regione superiore Atlantis Majoris. In convalle Aït Mesan et in jugo Tagherot a 2300 m. usque 3200 m.! In monte Djebel Tezah circ. 3000 m.!

Ar. Geog. Species per Europam omnem et in montibus regionis Mediterraneæ diffusa. Var. *indigesta* in summis montibus Hispaniæ, et in Pyrenæis obvia est.

FESTUCA ARUNDINACEA (*Schreb. Spec. Fl. Lips.* 57; *Koch, Syn. Fl. Germ.* ed. 2, 943),=F. elatior (*L. Sp. Pl., non Fl. Suec.*; *Kunth, Enum.* i. 404, *pro parte*).

Mar. merid.—Satis frequens in humidis reg. inferioris. Mesfioua! Ourika! Sheshaoua! In convalle Aït Mesan circ. 1300 m.! Visa in convalle Amsmiz!

—— ——, var. β, *Coss. in Expl. Scient. Alg.* 170,=F. interrupta (*Desf. Fl. Atl.* i. 89).

Mar. occid.—Casa Blanca!

Mar. merid.—Amsmiz! Mzouda!

Ar. Geog. Europa media. Sibiria. Regio Mediterranea occidentalis (exclusa Macaronesia). Ex Oriente non vidi. Var. in calidioribus hinc inde occurrit.

F. CÆRULESCENS (*Desf. Fl. Atl.* i. 87; *Kunth, Enum.* i. 406),=Kœleria tunicata (*Presl, Cyp. et Gram. Sic.* 34).

Mar. sept.—In monte Djebel Kebir prope Tanger! In monte Beni Hosmar prope Tetuan! Prope Ceuta!

Mar. merid.—Legi in monte supra Seksaoua circ. 1400 m.!

Ar. Geog. Africa boreali-occidentalis. Hispania. Sicilia. Legi in collibus prope Algeciras!

F. DURANDII (*Clauson in Billot Annot.* 163).

Mar. sept.—In monte Djebel Kebir prope Tanger (sec. Cosson, Expl. Scient. Alg. Add. 299), ad varietatem *F. spadiceæ*, L., referenda?

Ar. Geog. Species dubia in Africa boreali-occidentali indicata.

BROMUS (*L. Gen.* 89).

B. MOLLIS (*L., Kunth, Enum.* 413).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Misra ben Kara!

—— ——, var. **LEIOSTACHYS**, *M. K.*? Planta glabrior, panicula depauperata, spicis paucifloris.

Mar. merid.—In convalle Aït Mesan 1800–2100 m. (*J. D. H.*)!

—— ——, var. **RAMOSUS**, *nob.* Paniculæ ramis verticillatis insigniter inæqualibus.

Mar. merid.—Supra pagum Amsmiz, ad circ. 1200 m. s. m.!

Ar. Geog. Species in Europa fere omni, et in regione Mediterranea (inclusa Macaronesia) late diffusa. In America meridionali, forsan introducta?

B. ALOPECURUS (*Poir. Voy.* i. 100, *non Vahl*),=B. alopecuroides (*Poir. Dict. Suppl.* i. 703; *Kunth, Enum.* i. 415),=B. contortus (*Desf. Fl. Atl.* i. 95, tab. 25),=B. scoparius (*Guss., non L.*).

Mar. occid.—Casa Blanca!

Ar. Geog. Africa boreali-occidentalis. Sicilia. Fertur in Hispania (*Kunth, l. c.*), sed fide Willk. et Lge. Fl. Hisp., species hucusque non detecta.

BROMUS MACROSTACHYS (*Desf. Fl. Atl.* i. 96, tab. 10; *Kunth, Enum.* i. 415), = B. lanceolatus (*Roth, Catal. Bot.* i. 18; *Kunth, l. c.*), = B. divaricatus (*Rohde in Loisel. Not.*; *Kunth, l. c.*; *Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb spec.*)! Tetuan (1851)! (*Webb spec.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Ourika (*R. et Fr. spec. in Herb. Kew.*)!

—— ——, var. LANUGINOSUS (*Parlat. Fl. It.* i. 398, sub *Serrafalco*), = B. lanuginosus (*Poir. Dict. Suppl.* i. 703).

Mar. merid.—Occurrit frequentissime in regione calidiore, necnon in reg. inferiore Atlantis Majoris. Prov. Shedma! Prope urbem Marocco! Reraya! Seksaoua! Amsmiz! Mzouda! In convalle Aït Mesan usque 1400 m.!

Ar. Geog. Species per regionem fere omnem Mediterraneam (inclusa Macaronesia) dispersa. Varietas in Sicilia et in Africa boreali obvia est.

B. TECTORUM (*L.*, *Kunth, Enum.* i. 419).

Mar. sept.—Prope Tanger (*J. D. H.*)!

Mar. merid.—A radicibus Atlantis Majoris usque in regionem subalpinam. Reraya! In convalle Aït Mesan a 1400 m. ad 2500 m. s. m.!

Ar. Geog. Europa fere omnis (exceptis Lapponia et Britannia). Asia media. Regio omnis Mediterranea (inclusa Macaronesia).

B. MATRITENSIS (*L.*, *Kunth, Enum.* i. 419; *Schousb. Gew. Marok.* 31).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! In clivo montis Beni Hosmar prope Tetuan!

Mar. occid.—Casa Blanca! Mogador! (*Lowe Cat.*).

Mar. merid.—Frequens in regione inferiore. In ruderatis urbis Marocco! Reraya! Seksaoua! Amsmiz! Mesfioua! Vidimus etiam in convallibus Atlantis Majoris usque 1400 m. s. m.!

Ar. Geog. Regio omnis Mediterranea. In calidioribus Europæ mediæ.

B. MAXIMUS (*Desf. Fl. Atl.* i. 95, tab. 26; *Kunth, Enum.* i. 419), = B. rigidus (*Roth in Roem. et Ust. Mag. Bot.* fasc. x. 21; *Kunth, l. c.*).

Mar. sept.—Tanger (*Webb spec.*)!

Mar. occid.—Casa Blanca! Mogador!

Mar. merid.—Amsmiz!

Ar. Geog. Regio Mediterranea (inclusa Macaronesia). Occurrit in Gallia occidentali.

B. RUBENS (*L.*, *Kunth, Enum.* i. 420).

Mar. sept.—Tetuan (1851)!

Mar. occid.—Casa Blanca! In monte Djebel Hadid haud procul Mogador (*R. et Fr. spec. in Herb. Kew.*)!

Mar. merid.—In regione inferiore satis frequens. Aïn Oumast! Mesfioua! Ourika! Seksaoua! Milhaïn!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

LOLIUM (*L. Gen.* 95).

L. PERENNE (*L., Kunth, Enum.* i. 436; *Schousb. Gew. Marok.* 35).

Mar. sept.—Tanger (*Schsb. l. c.*).

Mar. occid.—Mogador (*Lowe Cat.*).

Mar. merid.—In convalle Aït Mesan circ. 1300 m. legi formam pumilam spicis depauperatis!

—— ——, var. ITALICUM,=L. italicum (*Al. Braun in Flora*),=L. Boucheanum (*Kunth, l. c.*); verisimiliter huc etiam var. *aristatum*, Schousb. l. c.

Mar. sept.—Tanger (*Webb Herb.*)! (*Schsb. l. c.*)?

Mar. occid.—Casa Blanca!

Mar. merid.—Ourika!

—— ——, var. RIGIDUM,=L. rigidum (*Gaud.*),=L. strictum (*Presl*).

Mar. occid.—Mogador!

Mar. merid.—Sheshaoua! Misra ben Kara!

Ar. Geog. Species per regiones temperatas hemisphæræ borealis late diffusa. Varietates nostræ in calidioribus occurrunt.

TRITICUM (*L. Gen.* 99).

De *Tritici* speciebus in territorio Maroccano cultis parum discere potui. *Triticum æstivum* (L., Schousb. Gew. Marok. 38) sæpissime colitur. Ad radices Atlantis (juxta Ourika et alibi) vidimus in agris speciem diversam verisimiliter ad *T. turgidum*, L., referendam.

T. VILLOSUM (*L.*, sub *Secale*; *Pal. Beauv. Agrost.* 103; *Kunth, Enum.* i. 440).

Mar. merid.—In glareosis Oued en Fisk prope Gurguri!

Ar. Geog. Regio Mediterranea fere omnis (exclusa Macaronesia).

T. HORDEACEUM (*Coss. et Dur. MSS.*).

Mar. merid.—Ad radices Atlantis Majoris. Sektana! Seksaoua! Visum etiam in convalle Aït Mesan!

Species Algeriensis mihi non bene cognita, monente cel. Coss. in Indice Pl. Marocc., jampridem a cl. Balansa in monte Djebel Sidi Fars prope Keira lecta.

T. JUNCEUM (*L., Kunth, Enum.* i. 444; *Schousb. Gew. Marok.* 39).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Schsb. l. c.*).

Mar. occid.—Mazagan! Saffi!

Ar. Geog. Species per hemisphæram borealem temperatam, præsertim in arenosis maritimis, late diffusa. Deest in Macaronesia.

TRITICUM ELONGATUM (*Host, Gram. Austr.* ii. 18),=T. rigidum (*Schrad. Sem. Hort. Gott.* 1803, 23; *Kunth, Enum.* i. 445).

Mar. sept.—Tanger! (*Webb spec.*)! (*Salzm. Exsicc.*)!

Ar. Geog. Europa media. Occurrit etiam hinc inde in regione Mediterranea. Deest in Macaronesia.

BRACHYPODIUM (*Pal. Beauv. Agrost.* 100, tab. 19).

B. PINNATUM (*L. Sp. Pl.* 115, sub *Bromo*; *P. B. l. c.* 101, *et auct. recent.*),=Triticum pinnatum (*Mœnch, En. Pl. Hass.* 102; *Kunth, Enum.* i. 445).

Mar. sept.—Tanger (*Webb Herb.*)! (*Schsb. l. c.*).

—— ——, var. AUSTRALE (*Gren. et Godr. Fl. Fr.* iii. 610),=Triticum phœnicoides (*DC. Fl. Gall.* vi. 284, *et auct. plurim.*),=Bromus ramosus (*Schousb. Gew. Marok.* 31?, *non L., nec Vahl*).

Mar. occid.—Casa Blanca! Mazagan (*J. D. H.*)!

Mar. merid.—Reraya (*J. D. H.*)!

Ar. Geog. Europa media. Regio Mediterranea (exclusa Macaronesia). Var. *australe* in calidioribus magis frequens.

B. RAMOSUM (*L. Mant.* i. 34, sub *Bromo*; *R. et Sch. Syst.* ii. 737),=Bromus pinnatus, var. β (*L. Sp. Pl.* 115),=Festuca cæspitosa (*Desf. Fl. Atl.* i. 91, tab. 24),=Triticum cæspitosum (*DC. Cat. Monsp.* 153; *Kunth, Enum.* i. 446),=Festuca phœnicoides (*All. Fl. Ped.* ii. 253, *vix L.*),=Brachypodium phœnicoides (*Coss. in Expl. Scient. Alg.* 191),=B. Plukenetii (*Link, Hort. R. Berol.* i. 40).

Mar. merid.—Legi in saxosis supra Seksaoua ad radices Atlantis Majoris! nec alibi vidimus.

Ar. Geog. Regio fere omnis Mediterranea (exclusa Macaronesia).

Bromus ramosus (Schousb. Gew. Marok. 31), "in arenosis maritimis Tingitanis abunde crescens," nequit huc referri; species genuina enim nemini in agro Tingitano post Schousbœum obvia fuit. Quid sit *Bromus longifolius* (Schousb. l. c.), *B. ramoso* suo affinis, et nisi habitu et foliis longioribus non distinguendus, eruere non potui. Verisimiliter inter varietates *Brachypodii pinnati* collocandus est.

B. DISTACHYUM (*L.*, sub *Bromo*; *R. et Sch. Syst.* ii. 741),=Triticum ciliatum (*DC. Fl. Fr.* iii. 85; *Salzm. Exsicc.*; *Kunth, Enum.* i. 447).

In omni territorio nobis cognito valde frequens.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan (1851)!

Mar. occid.—Casa Blanca! Mogador!

Mar. merid.—Passim in regione calidiore et in regione inferiore Atlantis Majoris. Prov. Shedma! Mesfioua! Reraya! In convalle Aït Mesan usque 1500 m.! In convalle Amsmiz! Seksaoua! Sektana (*R. et Fr. spec. in Herb. Kew.*)!

Variat insigniter statura pygmæa vel ultrapedali, culmis lævibus vel scabriusculis.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

SECALE (*Pal. Beauv. Agrost.* 105, tab. 20).

S. MONTANUM (*Guss. Ind. Sem. H. Boccadif.* 1825; *Parlat. Fl. It.* i. 517; *Kunth, Enum.* i. 449).

Mar. merid.—In convalle Aït Mesan circ. 1600 m.!

Ar. Geog. Africa boreali-occidentalis. Sicilia. Hispania.

ELYMUS (*L. Gen.* 96).

Genus forsan cum *Hordeo* conjungendum.

E. CAPUT MEDUSÆ (*L.*, *Kunth, Enum.* i. 452).

Specimen ex Imperio Maroccano conservatur in herb. Webb.

Mar. merid.—Prope Amsmiz! Prope Mzouda (*J. D. H.*)!

—— ——, var. CRINITUS, =E. crinitus (*Schreb. Gram.* 15, tab. 24; *Kunth, Enum.* i. 452). Differt glumis dimidio brevioribus, suberectis, nec patentissimis.

Mar. merid.—Specimen unicum legi in convalle Aït Mesan circ. 1400 m.!

Spec. nostrum gaudet glumellis pubescentibus ut fiunt in spec. prope Batna lectis (Balansa, Pl. d'Algérie, 1853, No. 733).

Ar. Geog. Species in Africa boreali-occidentali et in peninsula Iberica nascitur. Var. *crinitus* per Africam borealem, Orientem et Europam austro-orientalem hinc inde occurrit.

HORDEUM (*L. Gen.* 98).

H. BULBOSUM (*L.*, *Kunth, Enum.* i. 455), =H. strictum (*Desf. Fl. Atl.* i. 113; *Schousb. Gew. Marok.* 36; *Salzm. Exsicc.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)! (*Schsb. l. c.*).

Ar. Geog. Regio omnis Mediterranea (exclusa Macaronesia) præsertim occidentalis.

In Hispania Bætica non indicatur; legi tamen copiose crescens prope S. Roque!

H. MURINUM (*L.*, *Kunth, Enum.* i. 456).

Valde frequens in territorio omni nobis noto.

Mar. sept.—Tanger!

Mar. occid.—Casa Blanca! Mogador!

Mar. merid.—Shedma! In ruderatis urbis Marocco! Mzouda! In convalle Aït Mesan usque 1400 m.! Vidimus in convalle Amsmiz!

Ar. Geog. Europa omnis temperata. Regio omnis Mediterranea. In America extratropica tam boreali quam meridionali, sed forsan ex Europa allata.

H. MARITIMUM (*With. Bot. Arrang.* 172; *Kunth, Enum.* i. 456).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. occid.—Mazagan!

Ar. Geog. Species amphigea in maritimis hemisphæræ borealis et Americæ australis late diffusa.

ÆGILOPS (*L. Gen.* 1150).

Æ. OVATA (*L., Kunth, Enum.* i. 458).

Frequentissime occurrit in territorio omni nobis cognito.

Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. occid.—Casa Blanca!

Mar. merid.—Prov. Shedma! Reraya! In convalle Aït Mesan usque 1400 m. s. m.! Seksaoua! In convalle Amsmiz visa! Ludit glumis glabrescentibus, pubescentibus, vel villosis.

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

Æ. TRIUNCIALIS (*L., Kunth, Enum.* i. 458).

Mar. sept.—Tanger! (*Salzm. Exsicc.*)!

Mar. merid.—Seksaoua! Mesfioua!

Spec. ex Mesfioua ludit glumis glabris costis scabriusculis.

Ar. Geog. Regio Mediterranea imprimis occidentalis (exclusa Macaronesia).

Æ. VENTRICOSA (*Tausch in Flora,* 1837; *Boiss. Voy. Esp.* 682),=Æ. squarrosa (*Cavan. Icon.* tab. 90. fig. 2; *Salzm. Exsicc., non L.*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Mar. merid.—In convalle Aït Mesan circ. 1200 m. s. m.!

Ar. Geog. Italia. Hispania. Africa boreali-occidentalis.

LEPTURUS (*R. Br. Prod.* 207).

L. FILIFORMIS (*Trin. Fund. Agrost.* 123; *Kunth, Enum.* i. 462),= Rottbœllia erecta (*Savi, Fl. Pis.* iv. 230),=R. subulata (*Salzm. Exsicc., non Savi*).

Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb spec.*)! (*Spec. ex Herb. Schousboe*)!

Ar. Geog. In maritimis Europæ mediæ et regionis omnis Mediterraneæ (exclusa Macaronesia) dispersa.

MONERMA (*Pal. Beauv. Agrost.* 117).

M. CYLINDRICA (*Willd. Sp. Pl.* i. 464, sub *Rottbœllia*; *Coss. et Dur. in Expl. Scient. Alg.* 209),=M. subulata (*Pal. Beauv. l. c.*),=Lepturus cylindricus (*Trin. Fund. Agrost.* 123),=Rottbœllia subulata (*Savi, Due Cent.* 35; *DC. Fl. Fr.* vi. 281),=Lepturus subulatus (*Kunth, Enum.* i. 462).

Mar. sept.—In monte Djebel Kebir prope Tanger (*spec. ex Herb. Schousboe benev. comm. Cosson*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia). In Africa australi etiam obvia.

IMPERATA (*Cyr. Pl. rar. Neap.* fasc. ii. 26).

I. CYLINDRICA (*L.*, sub *Laguro*; *Pal. Beauv. Agrost.* 7),=I. arundinacea (*Cyr. l. c.*; *Kunth, Enum.* i. 477).

Mar. merid.—Ad ripas fluminis prope Misra ben Kara!

Ar. Geog. Species amphigea in temperatis calidioribus et in reg. tropicalibus orbis totius diffusa.

ANTHISTIRIA (*L. Gen.* 1359).

A. PALEACEA (*Vahl, Symb.* ii. 24, sub *Stipa*),=A. glauca (*Desf. Fl. Atl.* ii. 380, tab. 254; *Kunth, Enum.* i. 482),= Stipa paleacea (*Schousb. Gew. Marok.* 33).

"In collibus et locis aridis raro" (*Schsb. l. c.*), loco natali non indicato.

Ar. Geog. Species in Africa boreali continentali, necnon in Africa tropica occidentali, obvia.

SORGHUM (*Pers. Syn.* i. 101).

S. HALEPENSE (*L.*, sub *Holco*; *Pers. l. c.*),=Andropogon halepensis (*Sibth. et Sm. Prod. Fl. Gr.* i. 47; *Kunth, Enum.* i. 502).

Mar. merid.—Mzouda! Prope Frouga (*G. Maw*)!

Ar. Geog. Regio Mediterranea (exclusa Macaronesia). In America et Australia introducta.

ANDROPOGON (*L. Gen.* 1145).

A. HIRTUS (*L.*, *Kunth, Enum.* i. 492).

Mar. sept.—Prope Cap. Spartel!

Mar. occid.—Mogador (*Lowe Cat.*). In monte Djebel Hadid haud procul Mogador!

Mar. merid.—Ourika (*G. Maw*)!

Ar. Geog. Regio omnis Mediterranea (inclusa Macaronesia).

—— ——, var. LONGEARISTATUS, *Willk.*,= A. pubescens (*Vis. in Flora*, 1829, 1).

Mar. merid.—In rupestribus prope urbem Marocco (*G. Maw*)! In convalle Aït Mesan usque 1800 m. s. m.! Milhaïn (*J. D. H.*)!

Ar. Geog. Occurrit cum specie hinc inde in regione Mediterranea.

A. LANIGER (*Desf. Fl. Atl.* ii. 379; *Kunth, Enum.* i. 493).

Mar. merid.—In rupibus apricis prope urbem Marocco (*G. Maw*)! Prope Gurguri in via qua itur versus Amsmiz!

Ar. Geog. Species imprimis regionis desertorum, ab Indiæ orientalis ditione Pantjab usque prov. meridionales Imp. Maroccani.

A. ANNULATUS (*Forsk. Fl. Æg.-arab.* 173; *Kunth, Enum.* i. 498).

Mar. merid.—Prope Tasseremout detexit oculatissimus G. Maw et specimen mihi benevole dedit!

Ar. Geog. Per regiones subtropicales Asiæ occidentalis et Africæ borealis diffusus. Occurrit etiam in Africa australi.

POLLINIA (*Spreng. Pug.* ii. 12).

P. DISTACHYA (*Spreng. l. c.*; *Bert. Fl. Ital.* i. 463), = Andropogon distachyon (*L., Kunth, Enum.* i. 491; *Salzm. Exsicc.*).
Mar. sept.—Tanger! (*Salzm. Exsicc.*)! (*Webb Herb.*)! Tetuan!
Ar. Geog. Regio Mediterranea fere omnis (inclusa Macaronesia).

ENUMERATIO FILICUM, EQUISETACEARUM et LYCOPODIACEARUM in territorio Maroccano nobis cognitarum.

DAVALLIA CANARIENSIS, *Sm., H. et Bak. Syn.* 47.
Mar. sept.—In monte Djebel Kebir! Prope Cap. Spartel!

CISTOPTERIS FRAGILIS, *Bernh., H. et Bak. Syn.* 103.
Mar. merid.—In jugo Tagherot, 2700 m.! In monte Djebel Tezah circ. 2800 m.!

ADIANTUM CAPILLUS VENERIS, *L., H. et Bak. Syn.* 123.
Mar. sept.—In monte Beni Hosmar prope Tetuan!
Mar. occid.—Prope Mogador!
Mar. merid.—In hortis urbis Marocco!

CHEILANTHES FRAGRANS, *Webb, H. et Bak. Syn.* 134, = C. odora, *Sw.*
Mar. merid.—Mskala! Reraya! In convalle Aït Mesan! Seksaoua!

PTERIS ARGUTA, *Ait., H. et Bak. Syn.* 160.
Mar. sept.—Prope Tanger (*Blackmore spec.*)!

P. AQUILINA, *L., H. et Bak. Syn.* 162.
Mar. sept.—Frondes emarcidæ in monte Beni Hosmar prope Tetuan!
Mar. merid.—Vidimus in convalle Aït Mesan ultra 2000 m. s. m.!

ASPLENIUM HEMIONITIS, *L., H. et Bak. Syn.* 194, = A. palmatum, *Lam.*
Mar. sept.—In monte Djebel Kebir prope Tanger! (*Salzm. Exsicc.*)!
De *A. Hemionitis,* L., genuino conf. Hook. in Bot. Mag. lxxxii. tab. 4911. Planta Linnæana, a plurimis auctoribus cum *Scolopendrio Hemionitis* (*Hemionitis vera,* Clus.) confusa, citatur in Hispania in Cavan. prælect., sed nemini recentiorum obvia fuit. Habitat in rupibus graniticis prope Cintra, ubi eam olim legi; nec alibi (quoad sciam) in Europa hodie invenienda.

A. VIRIDE, *Huds., H. et Bak. Syn.* 195.
Mar. merid.—Specimina duo nana deteximus in regione superiore Atlantis Majoris in jugo Tagherot circ. 2800 m.!

Asplenium Trichomanes, *L., H. et Bak. Syn.* 196.
Mar. sept.—In monte Beni Hosmar prope Tetuan !
Mar. occid.—In monte Djebel Hadid haud procul Mogador !
Mar. merid.—In convalle Aït Mesan a 1500 m. usque 2200 m. s. m. !

A. **Petrarchæ**, *DC., H. et Bak. Syn.* 197.
Mar. merid.—Vidi specimen unicum nanum in fissuris rupium supra Milhaïn ; frondes avulsæ eheu perierunt, una excepta hodie in Herb. Kew. conservata !

A. **marinum**, *L., H. et Bak. Syn.* 207.
Mar. sept.—Vidimus in sic dicto antro Herculis a Cap. Spartel meridiem versus, loco inaccessibili crescens !

A. **Adiantum nigrum**, *L., H. et Bak. Syn.* 214.
Mar. merid.—In regione superiore Atlantis Majoris. In jugo Tagherot circ. 2800 m. s. m. !

—— ——, var. **Virgilii**,=A. Virgilii, *Bory et Chaub.*
Mar. sept.—In monte Djebel Kebir prope Tanger satis frequens !

A. **lanceolatum**, *Huds., H. et Bak. Syn.* 217.
Mar. sept.—Prope Cap. Spartel ! spec. Anglicis conforme.

—— ——, var. **obovatum**,=A. obovatum, *Viv.*
Mar. sept.—Prope Tanger ! (*Webb Herb.*) !

A. **Filix-fœmina**, *Bernh., H. et Bak. Syn.* 227.
Mar. sept.—In collibus inter Tanger et Tetuan !

A. **Ceterach**, *L., H. et Bak. Syn.* 245,=Ceterach officinarum (*Willd. et auctt. plurim.*).
Mar. sept.—Vidimus prope Tanger ! Legi in rupibus juxta Tetuan !
Mar. occid.—In monte Djebel Hadid haud procul Mogador !
Mar. merid.—Satis frequens ad radices Atlantis Majoris et usque in regionem superiorem. In convalle Aït Mesan et in ascensu jugi Tagherot 1400–2700 m. ! Amsmiz ! Seksaoua ! Milhaïn ! In monte Djebel Tezah (*J. D. H.*) !
Connubium generis *Ceterach* cum *Asplenio* naturæ abhorrens ; pace tantorum virorum vix posteris gratum erit.

Scolopendrium Hemionitis, *Clem. in Anal. Cienc. Nat.* v. (1802); *H. et Bak. Syn.*,=S. sagittatum, *DC.* Var. frondibus acute hastatis lobis triangulari-acuminatis.
Mar. sept.—In fissuris rupium montis Beni Hosmar !

Polypodium vulgare, *L., H. et Bak. Syn.* 334.
Mar. sept.—In monte Beni Hosmar prope Tetuan !

Nothochlæna vellea (*Ait. Hort. Kew.* ed. 1, iii. 457, sub *Acrosticho* ;

Desv. in Journ. Bot. iii. 92),=N. lanuginosa (*Desf. Fl. Atl.* ii., sub *Acrosticho*; *Desv. in Dict. Suppl.* iv. 110; *H. et Bak. Syn.* 370).

Mar. merid.—In rupestribus aridis haud infrequens. In rupibus prope urbem Marocco (*G. Maw*)! In convalle Aït Mesan 1500–1700 m.! prope Milhaïn! Aïn Tarsil!

GYMNOGRAMME LEPTOPHYLLA, *Desv., H. et Bak. Syn.* 383.
Mar. sept.—Tanger (*J. D. H.*)!

OSMUNDA REGALIS, *L., H. et Bak. Syn.* 427.
Mar. sept.—Legi in rupibus maritimis (mirum!) prope Tanger! In umbrosis versus Cap. Spartel!

OPHIOGLOSSUM LUSITANICUM, *L., H. et Bak. Syn.* 445.
Mar. sept.—Tanger (*Salzm. Exsicc.*)! (*Webb Herb.*)!

Filices Maroccanas paucas, et fere omnes admodum raras, secundum ordinem operis citati—Hooker et Baker, 'Synopsis Filicum,' edit. 2—enumeravi.

EQUISETUM TELMATEJA, *Ehrh.*
Mar. sept.—Tanger (*J. D. H.*)!

E. RAMOSISSIMUM, *Desf.*
Mar. sept.—Vidimus prope Tanger!
Mar. merid.—In convalle Aït Mesan!
Cum spec. typo conformibus legimus formam seu varietatem culmis majoribus paucistriatis, vaginarum dentibus magis numerosis.

ISOETES HYSTRIX (*Dur. in Expl. Scient. Alg.* tab. 36. fig. 1).
Mar. sept.—Legimus in pascuis subhumidis Tingitanis ad radices montis Djebel Kebir meridiem versus!

SELAGINELLA RUPESTRIS, *Spreng.*
Mar. merid.—In ditione Reraya circ. 1100 m. s. m.! In convalle Aït Mesan usque 1800 m.!

S. DENTICULATA, *Spreng.*
Mar. sept.—Tanger (*Webb Herb.*)! Inter Tanger et Tetuan!

MUSCI MAROCCANI.

A cl. W. Mitten determinati et enumerati.

DICRANELLA VARIA, *Hedw.* Beni Hosmar prope Tetuan!

GRIMMIA APOCARPA, *L.* Beni Hosmar prope Tetuan!

G. PULVINATA, *L.* In jugo Tagherot, alt. 3000 m.!

G. ORBICULARIS, *B. & S.* Aït Mesan circ. 2500 m.!

G. COMMUTATA, *Hüben.* Aït Mesan circ. 2500 m.!

TRICHOSTOMUM TOPHACEUM, *Brid.* Tanger et Tetuan!

T. CRISPULUM, *Bruch.* Tanger et Tetuan! In monte Beni Hosmar!

TRICHOSTOMUM MUTABILE, *Bruch.* Tanger et Tetuan!

T. BARBULA, *Schw.* Tanger et Tetuan!

TORTULA MURALIS, *L.* Tanger et Tetuan!

T. INERMIS, *Bruch.* Aït Mesan 2000–3000 m.!

T. RURALIS, *L.* Aït Mesan circ. 2000 m.!

ENCALYPTA VULGARIS, *Hedw.* In jugo Tagherot, 3000 m.!

ORTHOTRICHUM CUPULATUM, *Hoffm.* Aït Mesan 2000–3000 m.!

ENTOSTHODON OBTUSUS (*Dicks.*), = E. ericetorum, *De Notaris.* Tanger et Tetuan!

FUNARIA HYGROMETRICA, *L.* Tanger et Tetuan! Aït Mesan 1400–1500 m.!

BARTRAMIA (PHILONOTIS) RIGIDA, *Brid.* Tanger et Tetuan!

B. FONTANA, *L.* Djebel Tezah, alt. 1700–3000 m.!

BRYUM ALPINUM, *L.* Aït Mesan 2000–2600 m.!

B. PALLESCENS, *Schw.* Aït Mesan 2000–2600 m.!

B. CAPILLARE, *L.* Tanger et Tetuan!

B. TURBINATUM, *Hedw.* In jugo Tagherot 2700–3000 m.!

MNIUM UNDULATUM, *Hedw.* Beni Hosmar prope Tetuan!

LEUCODON SCIUROIDES (*L.*). Beni Hosmar prope Tetuan!

PTEROGONIUM GRACILE (*L.*). Beni Hosmar prope Tetuan!

HOMALOTHECIUM SERICEUM (*L.*). Beni Hosmar prope Tetuan!

LEPTODON SMITHII (*Dicks.*). Beni Hosmar prope Tetuan!

THAMNIUM ALOPECURUM (*L.*). Beni Hosmar prope Tetuan!

HYPNUM (RHYNCHOSTEGIUM) TENELLUM, *Dicks.* Tanger et Tetuan!

H. (EURHYNCHIUM) CIRCINATUM, *Brid.* Beni Hosmar prope Tetuan!

H. (SCLEROPODIUM) ILLECEBRUM, *Schw.* Tanger et Tetuan!

H. (BRACHYTHECIUM) VELUTINUM, *Dill.* Tagherot 2500 3200 m.!

H. (BRACHYTHECIUM) RUTABULUM, *L.* Aït Mesan 2000–3000 m.! In monte Djebel Tezah!

AMBLYSTEGIUM COMMUTATUM (*Hedw.*). Beni Hosmar prope Tetuan! Aït Mesan 2000–2500 m.!

FISSIDENS INCURVUS, *W. & M.* Beni Hosmar prope Tetuan!

F. TAXIFOLIUS, *L.* Tanger et Tetuan!

HEPATICÆ.

CEPHALOZIA TURNERI (*Hook.*). Beni Hosmar prope Tetuan!

C. BICUSPIDATA (*L.*). Beni Hosmar prope Tetuan!

CALYPOGEIA TRICHOMANIS (*L.*). Beni Hosmar prope Tetuan!

FOSSOMBRONIA ANGULOSA, *Raddi.* Tanger et Tetuan!

ASTERELLA HEMISPHÆRICA, *Beauv.* Aït Mesan 1400–2000 m.!

ANTHOCEROS PUNCTATUS. Beni Hosmar prope Tetuan!

POSTSCRIPTUM.

Clarus A. Leared, M.D., qui plagas meridionales Imperii Maroccani jampridem peragravit et illustravit, nuper mihi frustula nonnulla plantarum in itinere a Tingi ad urbes Mequinez et Fez anno 1877 suscepto benevole communicavit. Harum adjeci enumerationem brevem, et ob specimina nimis incompleta, pluribus locis incertam.

CLEMATIS FLAMMULA, *L.* Prope Alcazar.

*NIGELLA HISPANICA, *Coss.* Inter Tanger et Mequinez.

*DELPHINIUM, an sp. nov.? Flores in spica longa conferti; pedunculi tenues demum elongati, bracteis duabus linearibus longiusculis instructi. A *D. peregrino*, L., certe diversum. Inter Tanger et Mequinez.

FUMARIA CAPREOLATA, *L.*, var. Inter Tanger et Mequinez.

CAPPARIS SPINOSA, *L.* Inter Fez et Mequinez.

*RESEDA COLLINA, *J. Gay*? Inter Tanger et Mequinez.

CISTUS POPULIFOLIUS, *L.* Inter Tanger et Mequinez.

SILENE OBTUSIFOLIA, *W.* Inter Tanger et Mequinez.

S. LÆTA (*Ait.*). Inter Tanger et Mequinez.

HYPERICUM PERFOLIATUM, *L.* Inter Tanger et Mequinez.

LINUM CORYMBIFERUM, *Desf.*, var.? Inter Tanger et Mequinez.

ZIZYPHUS LOTUS (*L.*). Inter Tanger et Mequinez.

CYTISUS LINIFOLIUS (*L.*). Inter Tanger et Mequinez.

ONONIS VISCOSA, *L.* Inter Tanger et Mequinez.

TRIFOLIUM PROCUMBENS, *L.*, var. CAMPESTRE. Inter Tanger et Mequinez.

LOTUS HISPIDUS, *Desf.* Inter Tanger et Mequinez.

PSORALEA BITUMINOSA, *L.* Inter Tanger et Mequinez.

LYTHRUM FLEXUOSUM, *Lag.* Inter Tanger et Mequinez.

COTYLEDON HISPANICA, *L.*, var. SALZMANNI. Inter Tanger et Mequinez.

ECBALIUM ELATERIUM (*L.*). Prope Mequinez.

CENTRANTHUS CALCITRAPA (*L.*). Inter Tanger et Mequinez.

ODONTOSPERMUM AQUATICUM (*L.*). Inter Tanger et Mequinez.

ANACYCLUS RADIATUS, *Lois.* Inter Tanger et Mequinez.

ANTHEMIS MIXTA, *L.* Inter Tanger et Mequinez.

*ECHINOPS RITRO, *L.* Prope Muley Edris Serone.

GALACTITES TOMENTOSA, *L*, Inter Tanger et Mequinez.

CENTAUREA PULLATA, *L*. Inter Tanger et Mequinez.

SCOLYMUS HISPANICUS, *L*. Inter Tanger et Mequinez.

TOLPIS BARBATA, *Gærtn*. Inter Tanger et Mequinez.

CAMPANULA LŒFLINGII, *Brot*., var. DECUMBENS? Inter Tanger et Mequinez.

TRACHELIUM CÆRULEUM, *L*. Inter Tanger et Mequinez.

T. ANGUSTIFOLIUM, *Schousb*. Inter Tanger et Mequinez.

STATICE THOUINI, *Viv*. Inter Tanger et Mequinez.

ANAGALLIS ARVENSIS, *L*., var. LATIFOLIA. Inter Tanger et Mequinez.

A. LINIFOLIA, *L*. Inter Tanger et Mequinez.

*CONVOLVULUS, sp. nov. E grege *C. undulati*, Cav., sed certe diversus. Inter Tanger et Mequinez.

ECHIUM ANGUSTIFOLIUM, *Lam*. Inter Tanger et Mequinez.

ANCHUSA GRANATENSIS, *Boiss*.? Inter Tanger et Mequinez.

VERBASCUM SINUATUM, *L*. Inter Tanger et Mequinez.

ANTIRRHINUM ORONTIUM, *L*., var. GRANDIFLORUM. Inter Tanger et Mequinez.

ACANTHUS MOLLIS, *L*. Muley Edris Serone.

MENTHA PULEGIUM, *L*. Inter Tanger et Mequinez.

ORIGANUM ——? Inter Tanger et Mequinez.

*MELISSA OFFICINALIS, *L*., var. Inter Tanger et Mequinez.

STACHYS HIRTA, *L*. Inter Tanger et Mequinez.

CHENOPODIUM AMBROSIOIDES, *L*. Prope Mequinez.

DAPHNE GNIDIUM, *L*. Inter Tanger et Mequinez.

OPHRYS APIFERA, *Huds*. Inter Tanger et Mequinez.

XYPHION SISYRHYNCHIUM, *L*. Inter Tanger et Mequinez.

ASPHODELUS MICROCARPUS, *Salzm*. Inter Tanger et Mequinez.

ORNITHOGALUM ARABICUM, *L*. Inter Tanger et Tetuan.

ASPLENIUM HEMIONITIS, *L*. Inter Tanger et Mequinez.

GYMNOGRAMME LEPTOPHYLLA, *Desv*. Inter Tanger et Mequinez.

Inter species 53 enumeratas, sex, quorum nomina asterisco notata, in Imperio Maroccano nondum indicatæ sunt.

J. BALL.

Die 9 Mart. 1878.

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Fig. 1. *Arabis decumbens*, Ball, magnit. nat. 2. Flos, magnit. auct. 3. Pistillum, magnit. auct. 4. Racemus fructifer, magnit. nat. 5. Siliqua, magnit. auct.

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Fig. 1. *Thymus maroccanus*, Ball. Ramus florifer, magnit. nat. 2. Flos, magnit. auct. 3. Flos expansus, magnit. auct. 4. Stamen, magnit. auct. 5. Calyx cum pistillo corolla delapsa, magnit. auct. 6. Ovarium, magnit. auct.

PLATE XXVIII.

Fig. 1. *Salvia maurorum*, Ball. Caulis pars superior florifera, cum ramo foliaceo, magnit. nat. 2. Flos, magnit. auct. 3. Stamina, magnit. auct. 4. Calyx cum pistillo corolla delapsa, magnit. auct. 5. Ovarium, magnit. auct.

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